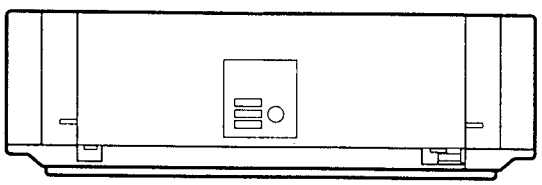
GoldStar

VHS PAL VIDEO CASSETTE PLAYER

SERVICE MANUAL

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE"SAFETY PRECAUTIONS" IN THIS MANUAL



MODEL : P-500P

GoldStar

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SECTION 1
SUMMARY

IMPORTANT SAFETY PRECAUTIONS

Prior to shipment from the factory, the products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

• Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▒▒) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Use Specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistor

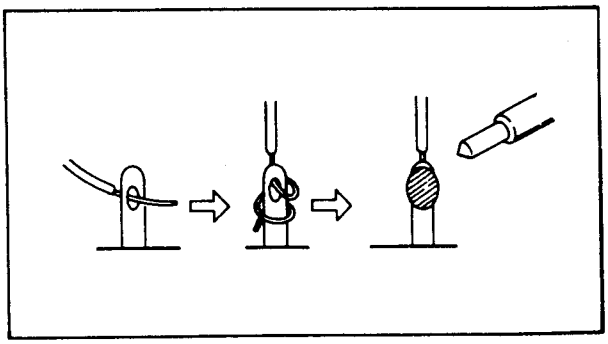


Fig. 1

5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.(Fig. 1)

6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

7. Check that replaced wires do not contact sharp edged or pointed parts.

8. When a power cord has been replaced, check that 10-15Kg of force in any direction will not loosen it.(Fig. 2)

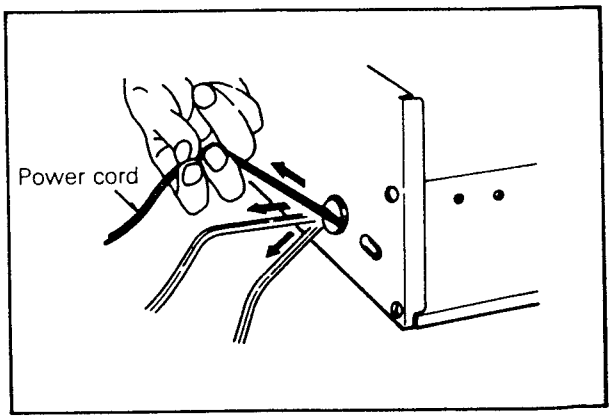


Fig. 2

9. Also check areas surrounding repaired locations.

10. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the parts specified. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

SAFETY CHECK AFTER SERVICING

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions. Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

• Insulation resistance test

Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table below.

• Dielectric strength test

Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set(RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table below.

• Clearance distance

When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table below.

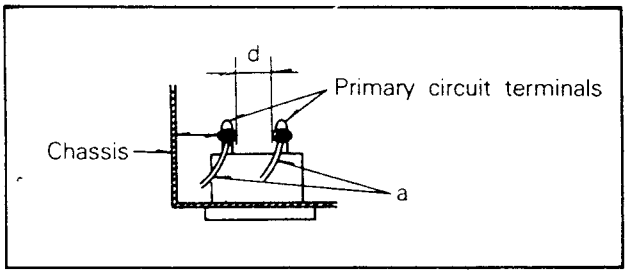


Fig. 3

Table 1:Ratings for selected areas

AC Line Voltage	Region	Insulation Resistance	Dielectric Strength	Clearance Distance(d),(d)
*110 to 130 V 200 to 240 V	Europe Australia	≧10 MΩ/500 V DC	4kV 1 minute	≧6mm(d) ≧8mm(d) (a Power cord)

*Class II model only.

Note. This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

• Leakage Current test

Confirm specified or lower leakage current between B(earth ground, power cord plug prongs) and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.)

Measuring Method: (Power ON)
Insert load Z between B(earth ground, power cord plug prongs) and exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure and following table.

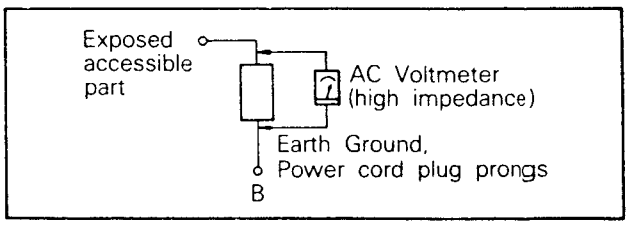


Fig. 4

Table 2:Leakage current ratings for selected areas

AC Line Voltage	Region	Load Z	Leakage Current(i)	Earth Ground (B) to:
100 to 130 V	Europe	2kΩ	i≦0.7m A peak i≦2m A dc	Antenna earth terminals
200 to 240 V	Australia	50kΩ	i≦0.7m A peak i≦2m A dc	Other terminals

Note. This table is unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

INTRODUCTION

This service manual provides a variety of service information. It contains the mechanical structure of the Video Cassette Player (VCP) together with mechanical adjustments and the electronic circuits in schematic form.

This VCP was manufactured and assembled under our strict quality control standards and meets or exceeds indurstry specifications and standards.

FEATURES

- HQ, HIGH QUALITY PICTURE ENHANCEMENT SYSTEM
- CONVENIENT FRONT LOADING SYSTEM
- REMOTE CONTROL FUNCTION
- SOFT TOUCH CONTROLS WITH MOCROPROCESSOR
- QUICK START PLAYBACK FUNCTION
- PLAYBACK UP TO 4 HOURS WITH E-240 TAPE IN SP MODE
- VISUAL SERCH RUNCTION:7 TIMES (SP MODE)
- JET SEARCH FUNCTION:11 TIMES (SP MODE)
- LOGIC SEARCH FUNCTION
- FREEZE FUNCTION (STILL), FINE STILL-SLOW EFFECT
- FRAME ADVANCE
- AUTO POWER FUNCTION
- AUTO PLAYBACK FUNCTION
- AUTOMATIC REPEAT PLAYBACK
- AUTO TRACKING SYSTEM
- AUTO HEAD CLEANER

SPECIFICATIONS

General :

Television System	: CCIR Standard (625 lines 50 fields) PAL,SECAM colour signal
Tape Formal	: Tape Width 1/2" (12.7mm high density tape VHS)
Tape Speed	: 23.39mm/sec.
Maximum Playback Time	: 4 hours at SP mode (with E-240 tape) 2.4 hours at SP mode (with T-160 tape)
RF Output	: PAL G
RF Modulator	: UHF channel 32~40 adjustable 74±4dBμ 75 ohm unbalanced
Dimensions (WxHxD)	: 290×88×348mm (11.4"×3.2"×13.7")
Weight	: 5.6kg approx.
Operating Temperature	: 5℃-35℃
Operating Humidity	: 35%-80%
Power Source	: AC230V±10%, 50Hz (DC 12 $^{+3}_{-0}$ V)
Power Consumption	: Approx, 25W.

Video :

Output Level	: VIDEO OUT (RCA phone type) 2.0Vp-p 75 ohm unbalanced
Signal to Noise Ratio	: Nore than 43dB (at SP mode)

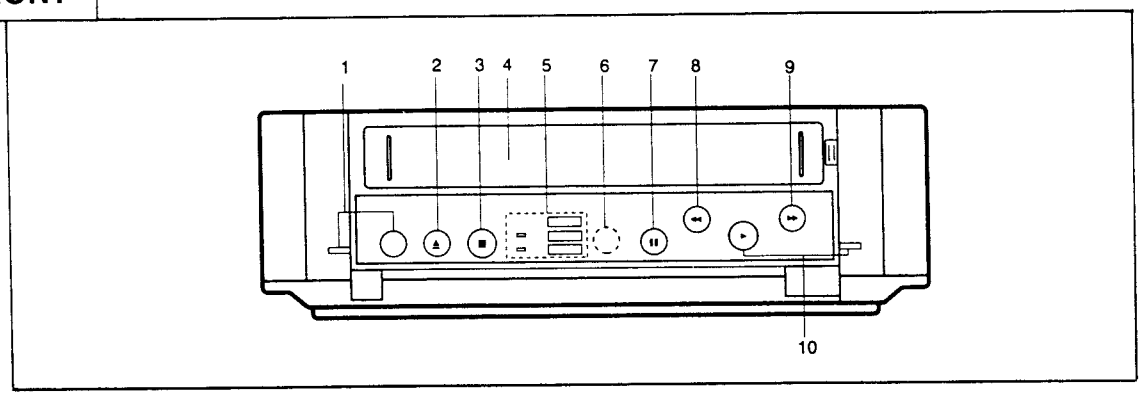
Audio :

Output Level	: AUDIO OUT (RCA phone type) -5±1.5dBm (at 1KHz)
Audio Frequency Response	: 200Hz-8KHz
Signal to Noise Ratio	: More than 40dB (at SP mode)

- Design and specifications are subject to change without notice.

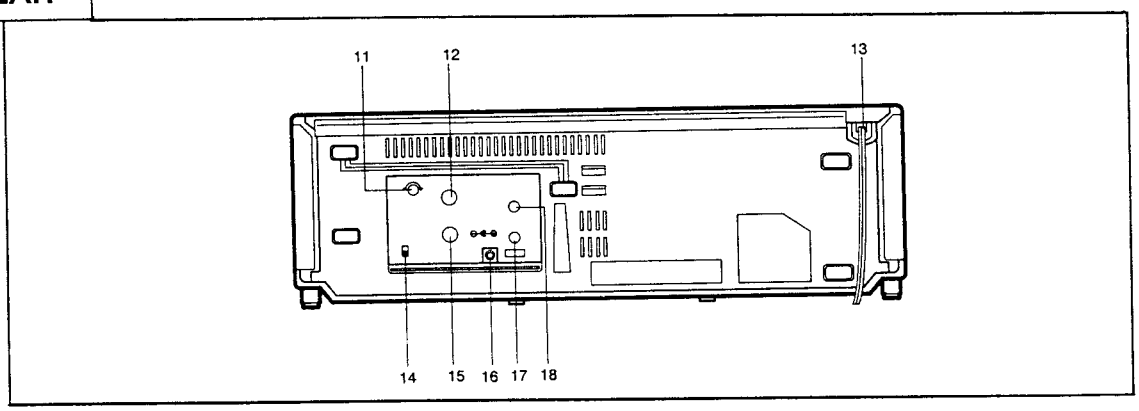
LOCATION OF CUSTOMER CONTROLS

FRONT



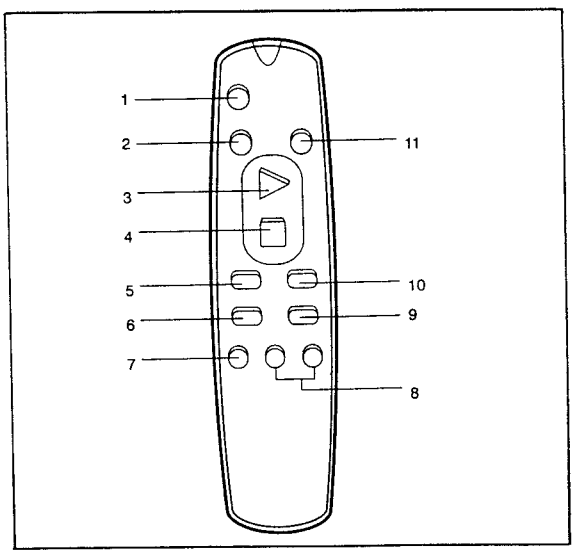
1. OPERATE BUTTON AND INDICATOR
2. EJECT BUTTON
3. STOP BUTTON
4. CASSETTE COMPARTMENT
5. FUNCTION INDICATOR
6. REMOTE CONTROL SENSOR
7. STILL BUTTON
8. REWIND/REVIEW BUTTON
9. FAST FORWARD/CUE BUTTON
10. PLAY(X2) BUTTON AND INDICATOR

REAR



11. RF CHANNEL CONTROL
12. RF OUT AERIAL TERMINAL
13. POWER CORD
14. TPSG ON/OFF SWITCH
15. AERIAL IN TERMINAL
16. DC INPUT JACK
17. AUDIO OUT CONNECTOR
18. VIDEO OUT CONNECTOR

REMOTE CONTROL



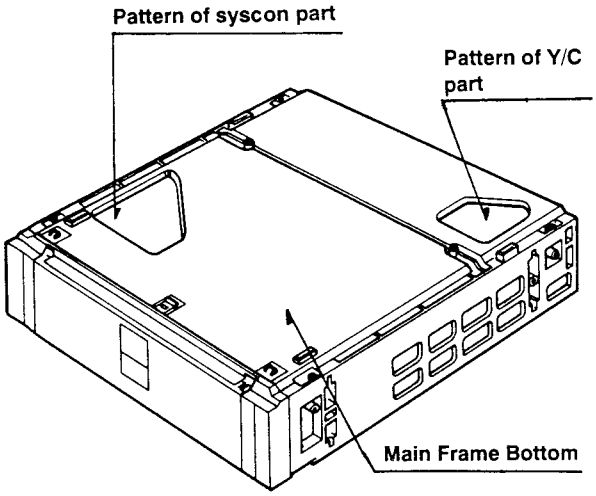
1. OPERATE BUTTON
2. EJECT BUTTON
3. PLAY(X2) BUTTON
4. STOP BUTTON
5. REWIND/REVIEW BUTTON
6. STILL BUTTON
7. AUTO TRACKING BUTTON
8. MANUAL TRACKING BUTTONS(-/+)
9. FRAME ADVANCE BUTTON
10. FAST FORWARD/CUE BUTTON
11. AUTO REPEAT BUTTON

SECTION 2
CABINET & MAIN FRAME
SERVICE METHOD

1. CHECK AND REPLACEMENT OF THE MECHANICAL AND ELECTRICAL PARTS

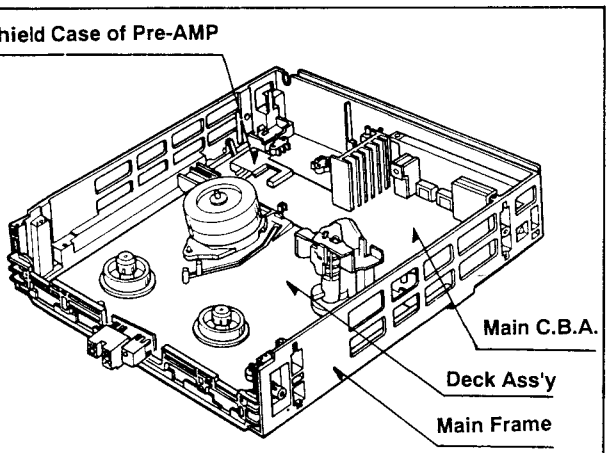
1-1) PARTS CHECK BEFORE SERVICING

① Remove the Top Case, Bottom Cover in Fig.2-3 (See Page 2-3).
② Check the Pattern of C.B.A. through the holl of the Main Frame bottom (See Fig.2-1-a).
③ Romove the Shield Case, check the Pre-Amp Package (See Fig. 2-1-b).



(Solder side of Main C.B.A)

Fig.2-1-a



(Component Side of Main C.B.A.)

Fig.2-1-b

1-2) CHECK AND REPLACE OF THE PARTS

① Remove the Top Case, Bottom Cover, Front Panel in Fig. 2-3, 2-4 (See page. 2-3).
② Remove the Housig Ass'y, Deck Ass'y in Fig. 2-6 (See page 2-4).
③ Remove the Power Ass'y, Main C.B.A in Fig. 2-5, 2-7 (See page 2-3, 2-4).
④ Perform the SVC using the SVC JIG.
⑤ Reassembling Housing to Deck Ass'y.
⑥ Reassembling Power Ass'y to Main Frame

<SVC JIG Connecting Method>

a) Junction C.B.A connect the JIG Cable ① to Main C.B.A (P5D03, P5D04).
b) Flat wire of Drum Ass'y connect the JIG Cable ① to Pre-Amp (P3D01).
c) Main C.B.A (P1101) connect the JIG Cable ② to Power Ass'y (P1011).

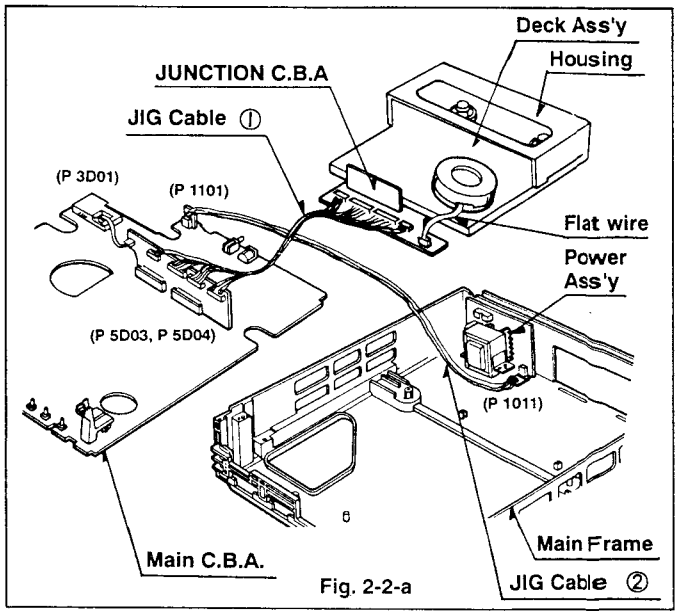


Fig. 2-2-a

* JIG Cable ① and JIG Cable ② Connection Method

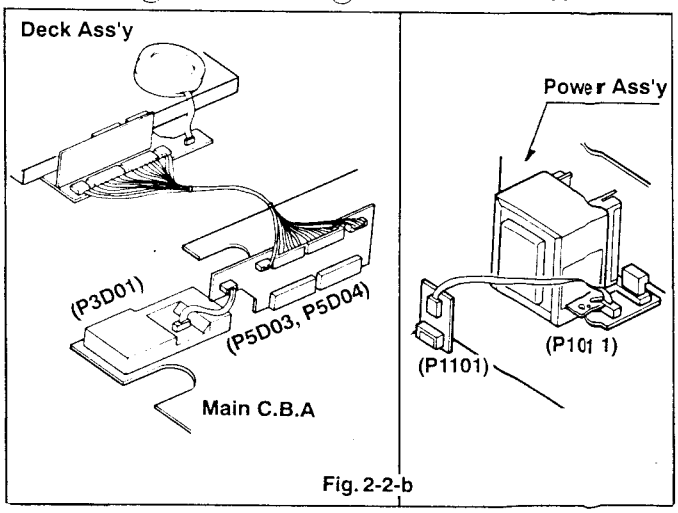
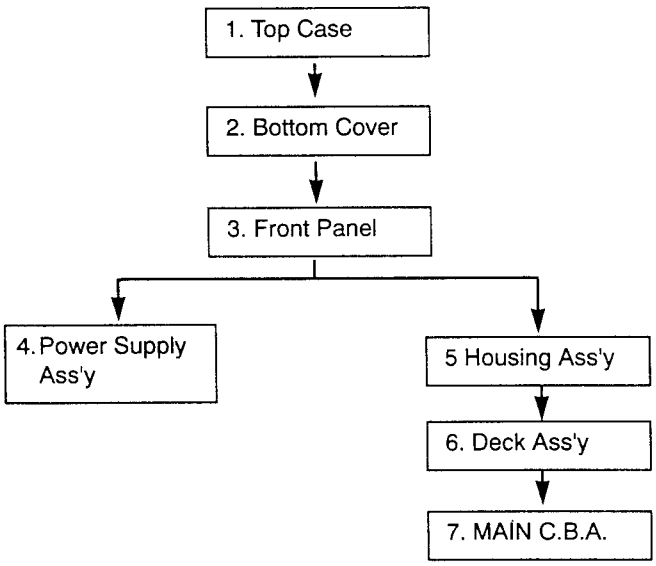


Fig. 2-2-b

DISASSEMBLY OF CABINET & CIRCUIT BOARD
SERVICE JIG LIST

1. DISASSEMBLY FLOW CHART

This flow chart indicates the disassembly steps of the cabinet and the P.C. Boards in order to gain access to item (s) to be serviced. When reassembling, perform the item(s) in the reverse order.



2. DISASSEMBLY METHOD

1) Top Case / Bottom Cover
   A. Remove 4 screws(A) (See Fig. 2-3).
   B. Hold the back of Top Case and lift up slightly backward to remove it.
   C. Remove 8 screws(B) to remove the Bottom Cover (See Fig. 2-3).

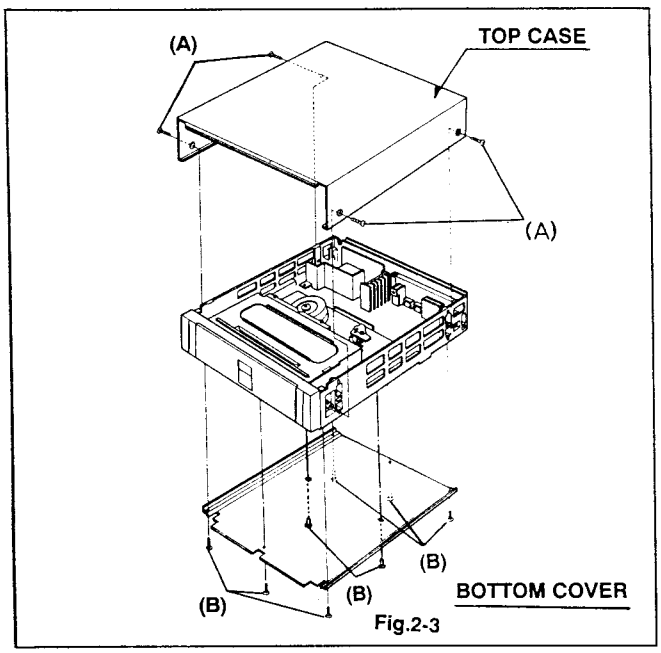


Fig.2-3

2) Front Panel
   A. Remove the Top Case (See Fig. 2-3)
   B. Remove 2 screws(c) (See Fig. 2-4).
   C. Remove the 3 stoppers on the bottom of the Front Panel.
   D. Remove the 2 stoppers on the top of the Front Panel.

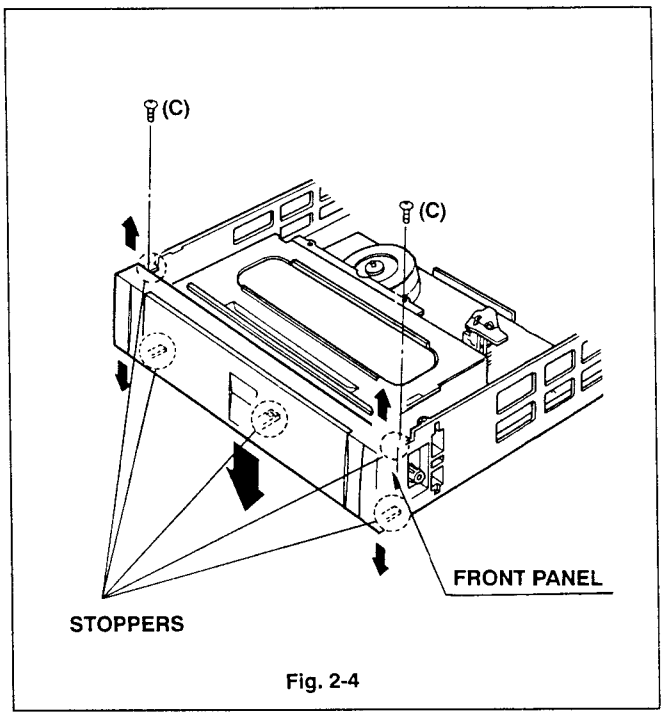


Fig. 2-4

3) Power Circuit Board
   A. Remove 4 screws (D) and 4 pin connector (P1101).
   B. Lift up the power Ass'y in the direction of the arrow.

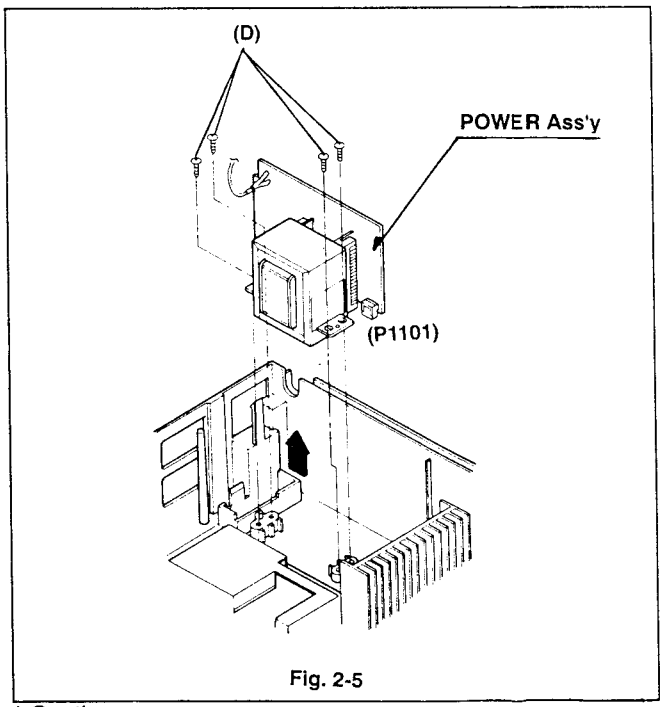


Fig. 2-5

* Caution
- when removing the Power Ass'y, be careful not to damage Connector (P1101).

4) Housing & Deck Ass'y

A. Remove 2 screws (E-1) of the Bracket.
B. Remove 2 screws (E).
C. Lift up the Housing Ass'y in the direction of the arrow.
D. Remove 3 screws(F)
E. Release Junction C.B.A.Connector from the Main C.B.A. Connector (P5D03, P5D04).
F. Remove Flat wire of the Deck Ass'y from the Pre-Amp Connector (P3D01).
G. Lift up the Deck Ass'y in the direction of the arrow.

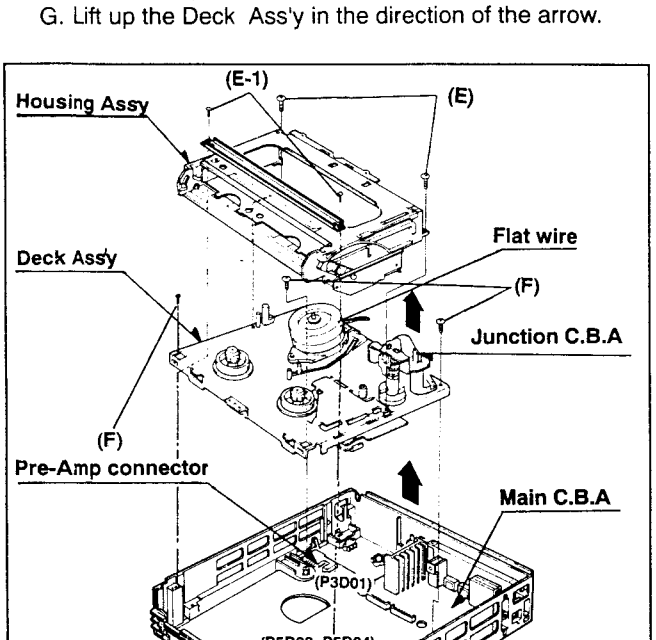


Fig. 2-6

* Caution
- When removing the Deck Ass'y, be careful not to damage Main C.B.A.

5) Main Circuit Board

A. Remove one Housing Ass'y (See Fig. 2-6).
B. Remove one Deck Ass'y (See Fig. 2-6).
C. Remove 2 screws (G).
D. Push the 1 Hook from the Main Frame.
E. Lift up the Main C.B.A. in the direction of the arrow.

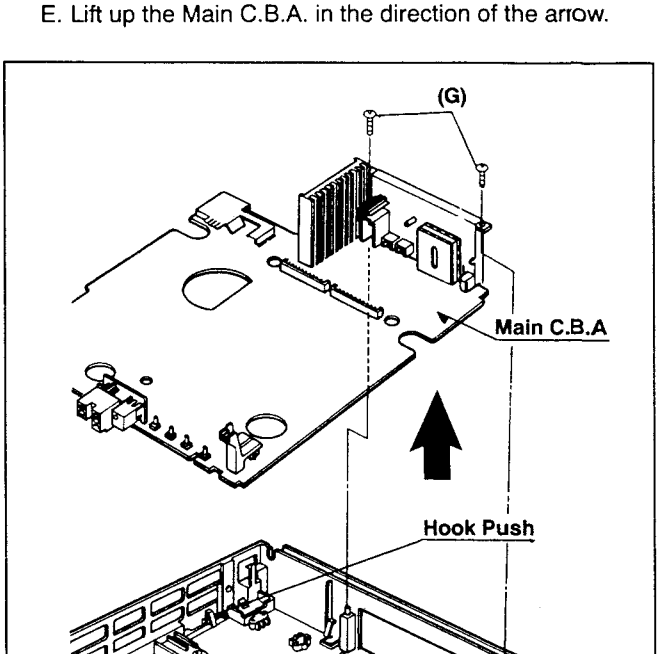
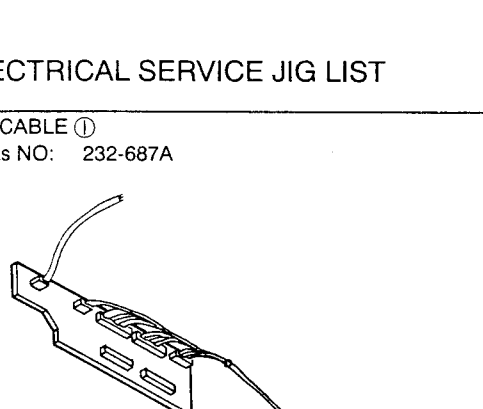


FIG. 2-7

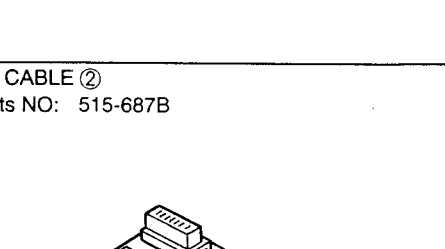
* Caution
- When reassembling the Deck Ass'y, be careful not to damage Sensor.

3. ELECTRICAL SERVICE JIG LIST

1. JIG CABLE ①
Parts NO: 232-687A



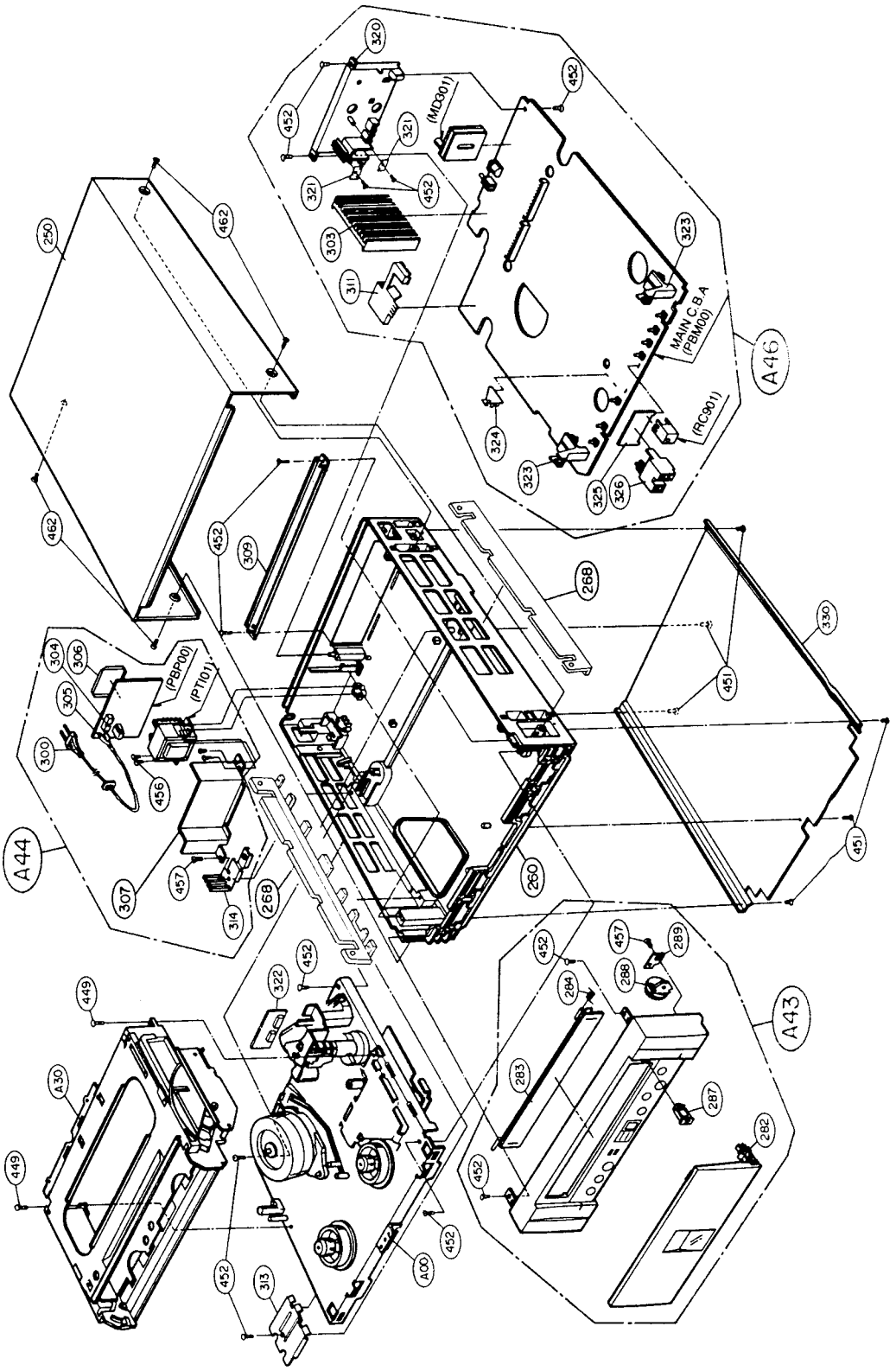
2. JIG CABLE ②
Parts NO: 515-687B



EXPLODED VIEWS

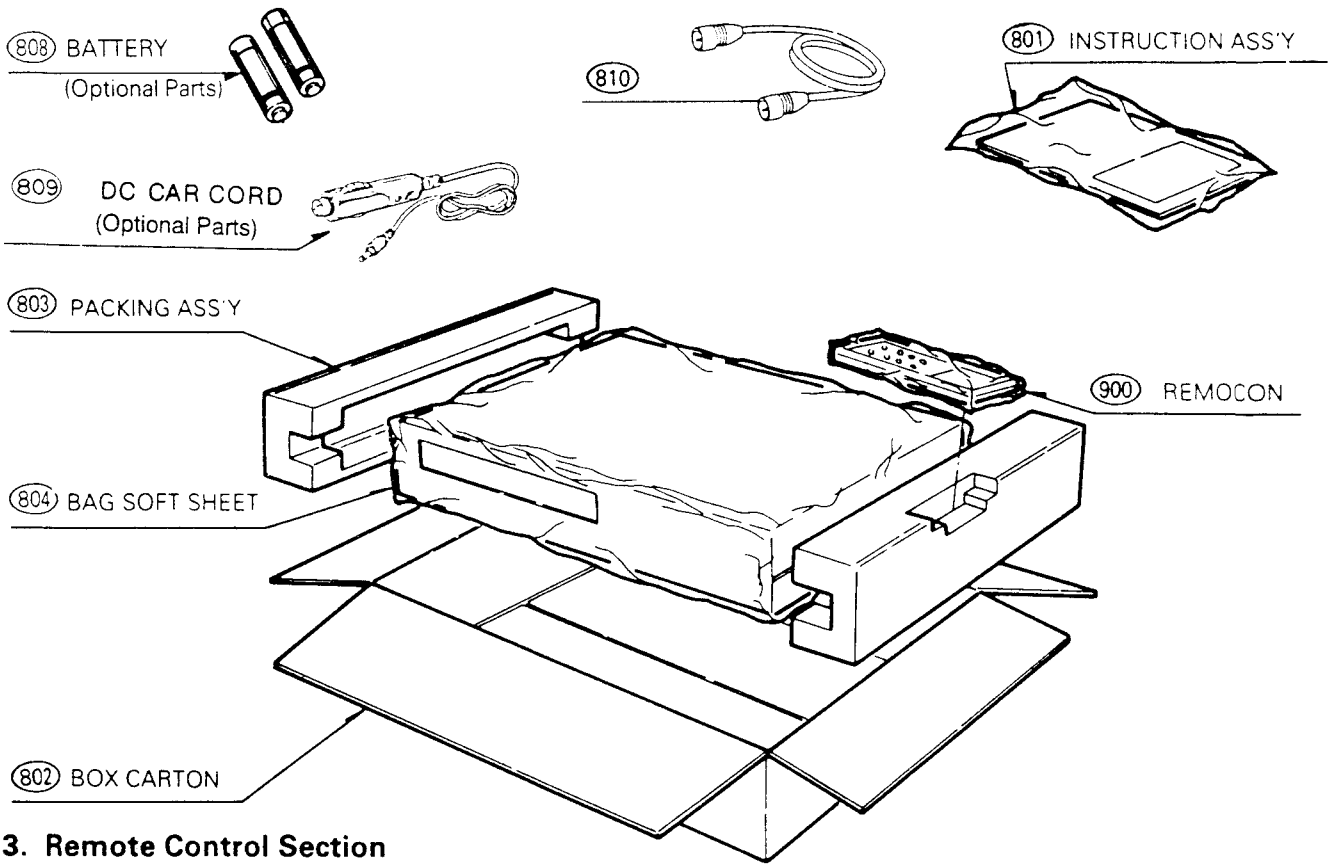
1. Cabinet & Main Frame Section

NOTE) 1. Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.

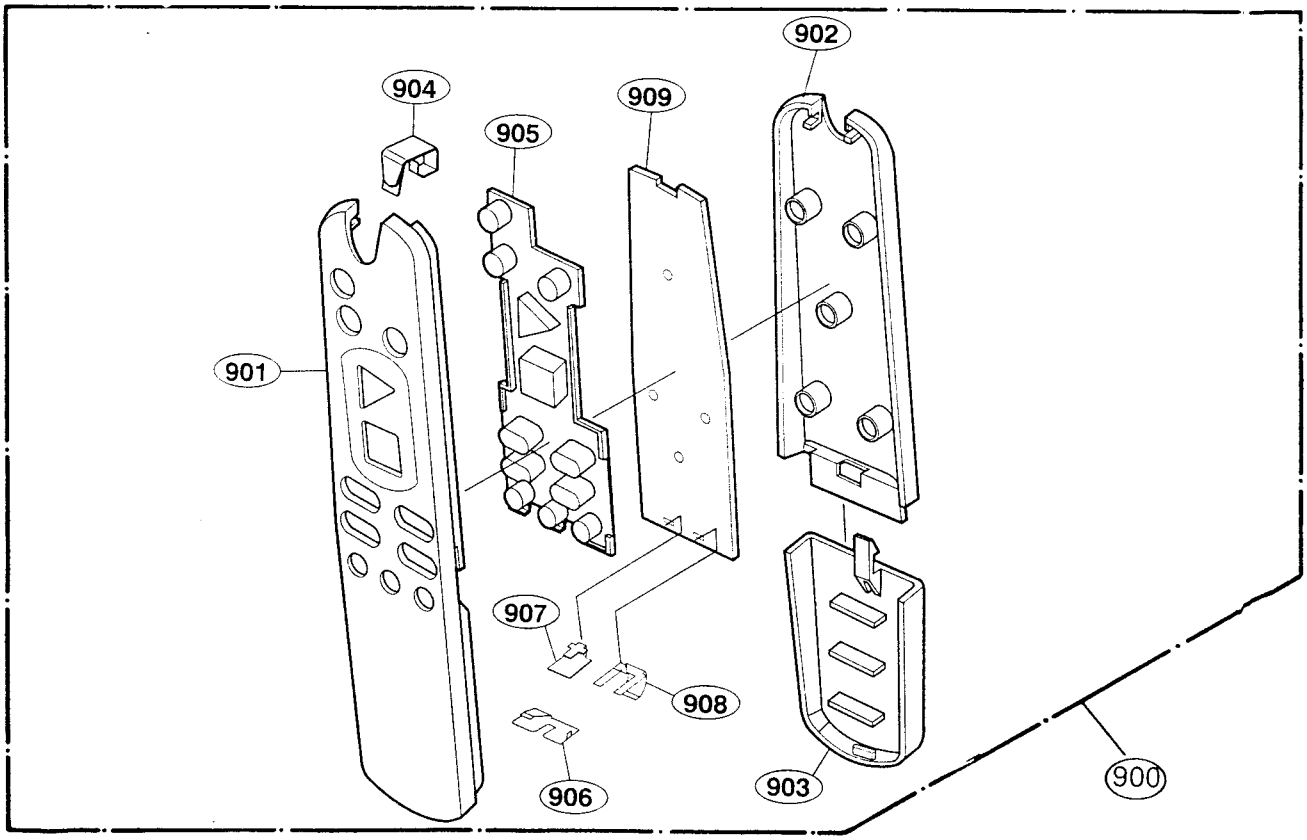


2. Packing Accessory Section

NOTE) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.



3. Remote Control Section



SECTION 3
ELECTRICAL

ELECTRICAL ADJUSTMENT PROCEDURES

● Electronic Test Equipment Requirement

- Oscilloscope
- Video Signal Generator
- Audio Signal Generator
- Level Meter
- Frequency Counter
- Modem Tester
- D.C Power Supply
- Monitor Scope
- Digital Multimeter
- Digital Voltmeter
- Test Tape(SP)

1. Servo Circuit 1) ±PG Adjustment

MODE	SPECIFICATIONS	ADJUSTMENT POINT	TEST POINT
Playback	6.5H±0.5H	VR 501	W513 (H.SW)
			JK 302 (video out)

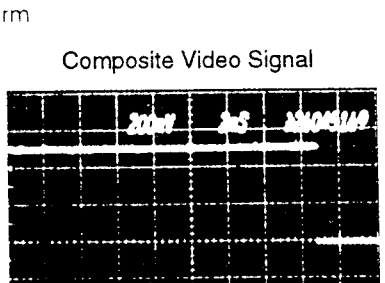
Purpose :
For phase dividing video A/B head with 180° and tracing each track exactly to meet head switching point with VHS SPEC.

Procedure :
a) Set PAL/SP test tape to playback.
b) Connect CH-1 terminal of oscilloscope to W513 (H.SW) and CH-2 terminal to Video Out Terminal JK302 (yellow).
c) Adjust VR501 so that the distance from A(B) head selection point of H.SW signal to the starting point of vertical synchronized signal is 6.5H(416 μ sec, 1H=64 μ sec) to trigger the composite video signal of CH-2 CH-1 H.SW.

Reference :
1. ±PG adjustment is practiced in the state of the RF level being maximum and servo system locking.
2. The adjustment Spec. and the practice difference should be within ±0.5H(32 μ sec).
3. Oscilloscope and VCR set should be connect GND.

Waveform

Composite Video Signal



6.5H (416μ sec)
H.SW (W395)

Fig. 3-1

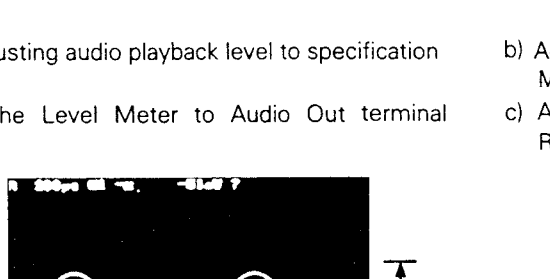
2. Audio Circuit 1) Audio Playback Level Adjustment

MODE	SPECIFICATIONS	ADJUSTMENT POINT	TEST POINT
Playback	−5±1.5dBm	R/P Heed hight & azimuth	Audio Out Jack

Purpose :
This is for adjusting audio playback level to specification

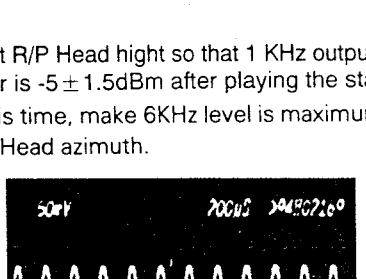
Procedure :
a) Connect the Level Meter to Audio Out terminal
b) Adjust R/P Head hight so that 1 KHz output level of Level Meter is -5±1.5dBm after playing the standardtape.
c) At this time, make 6KHz level is maximum to adjust R/P Head azimuth.

Waveform



1KHz

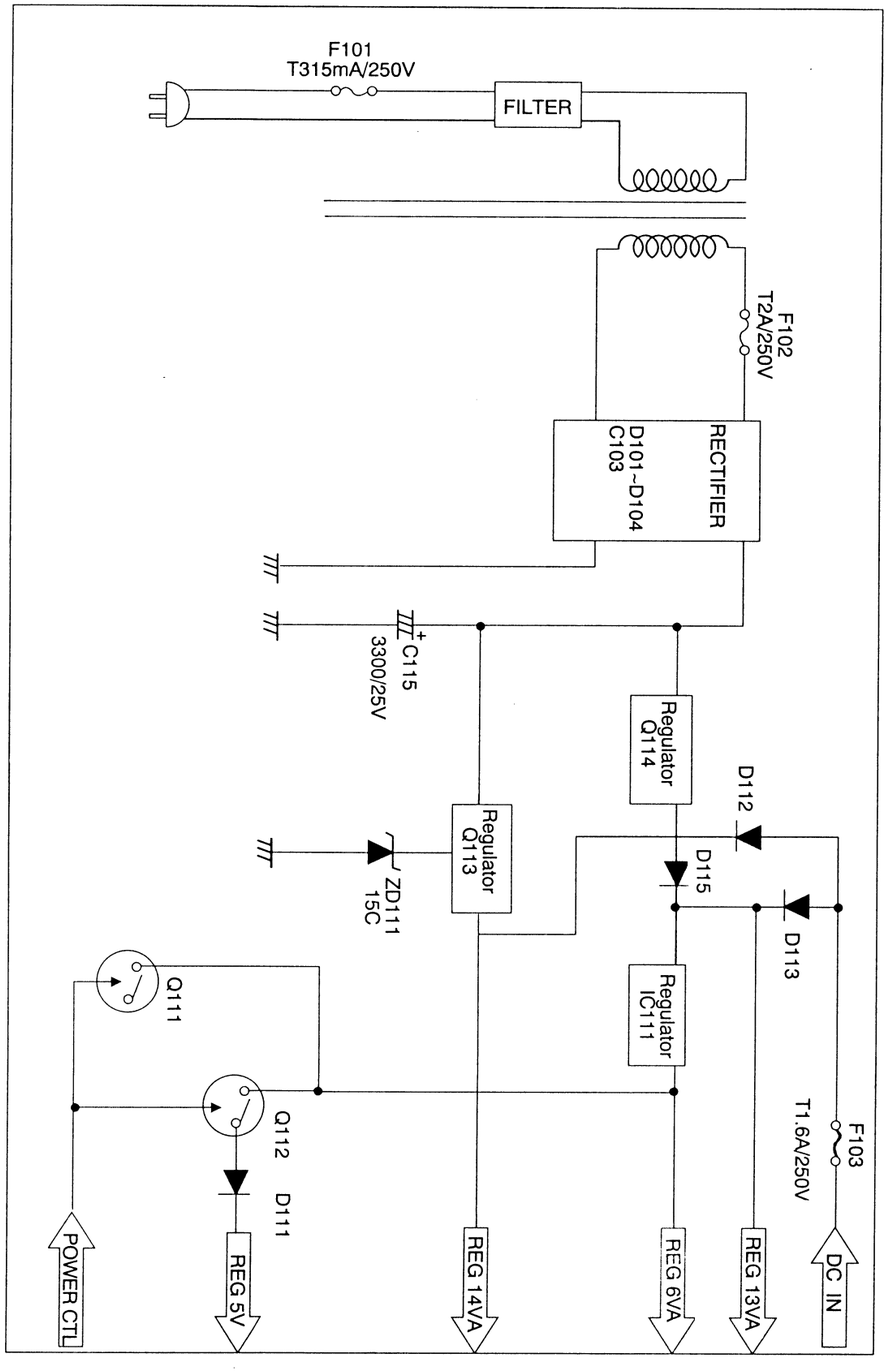
Fig. 3-2

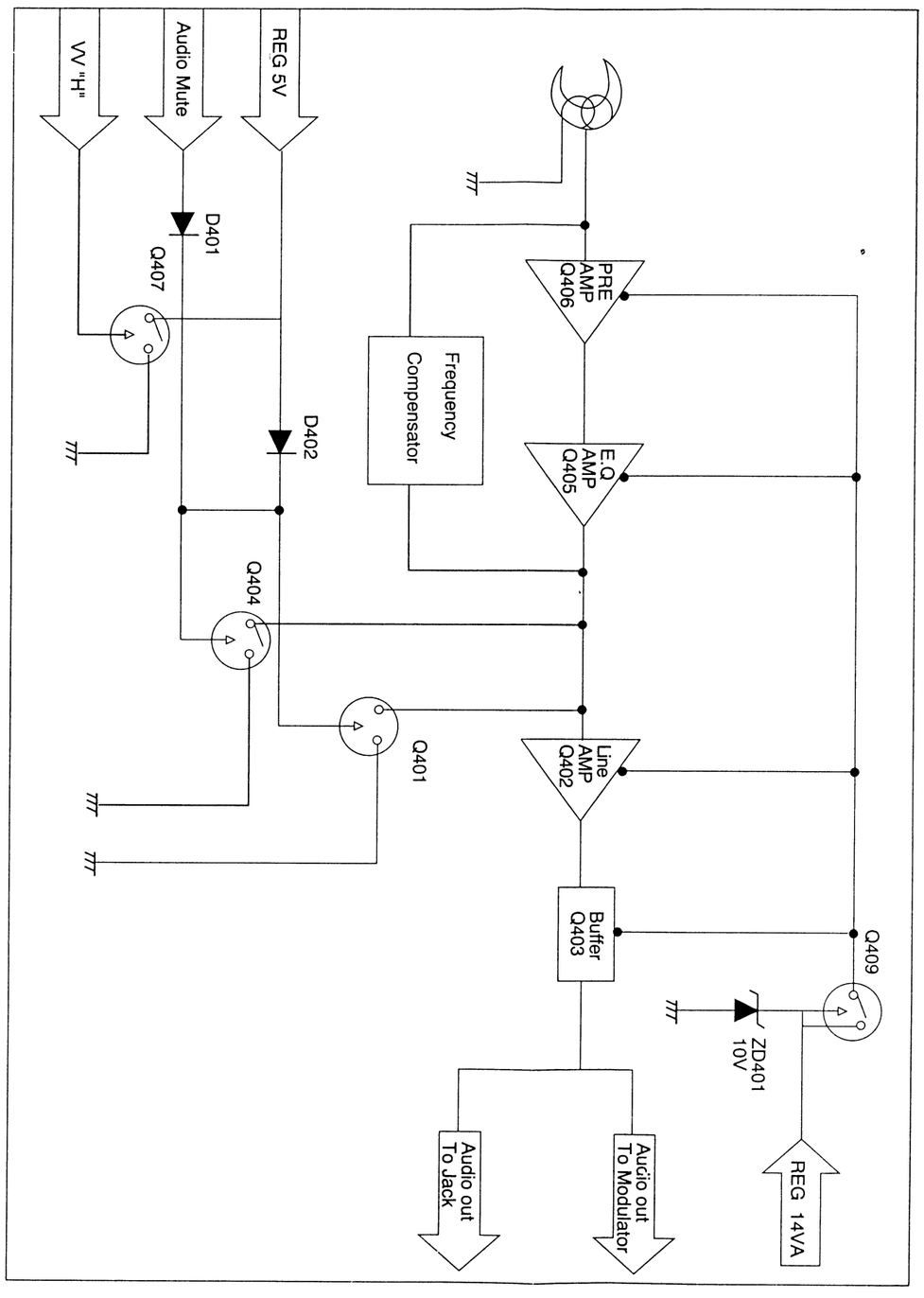


6KHz

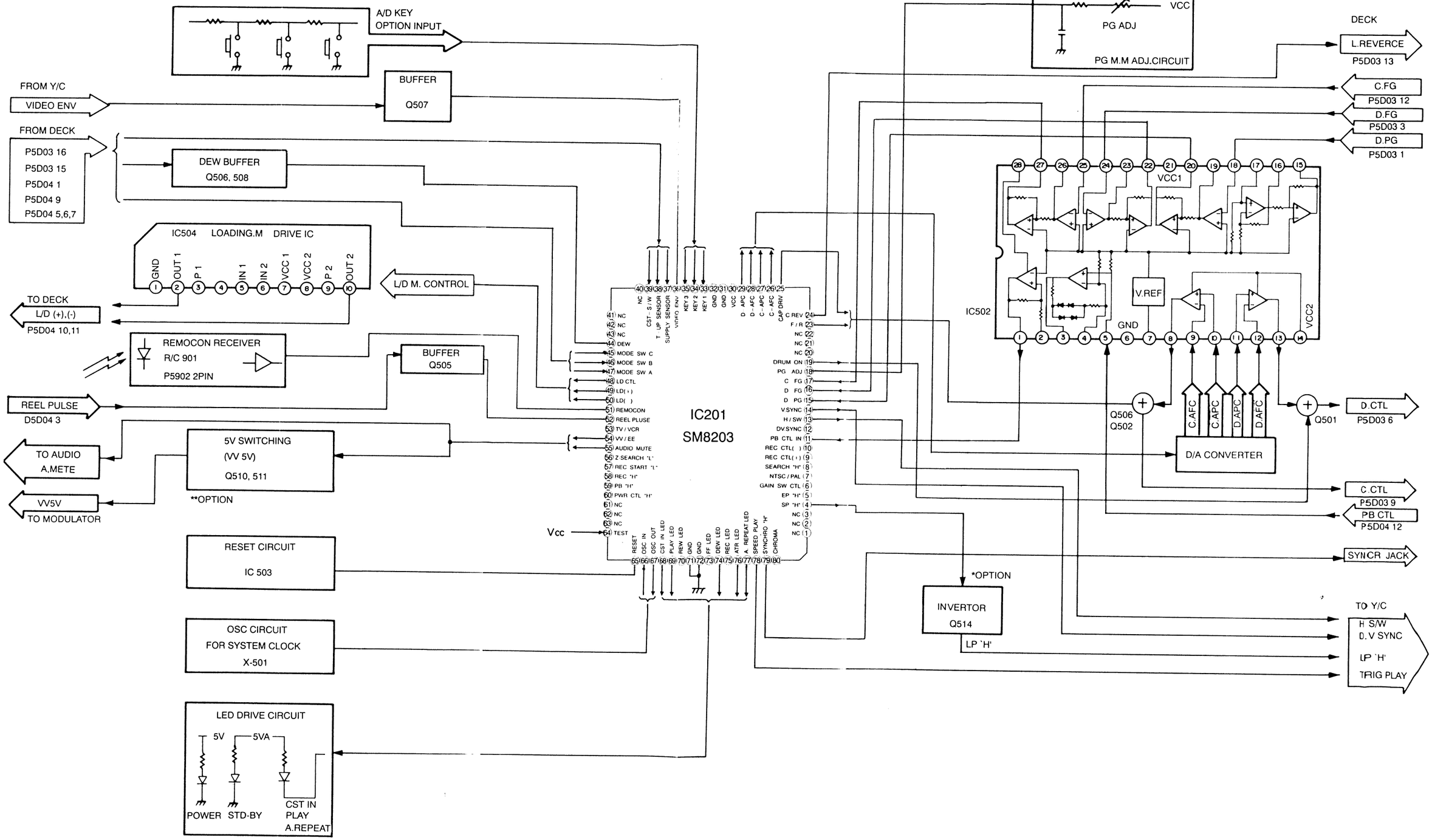
BLOCK DIAGRAMS

1. Power/Audio Block Diagram

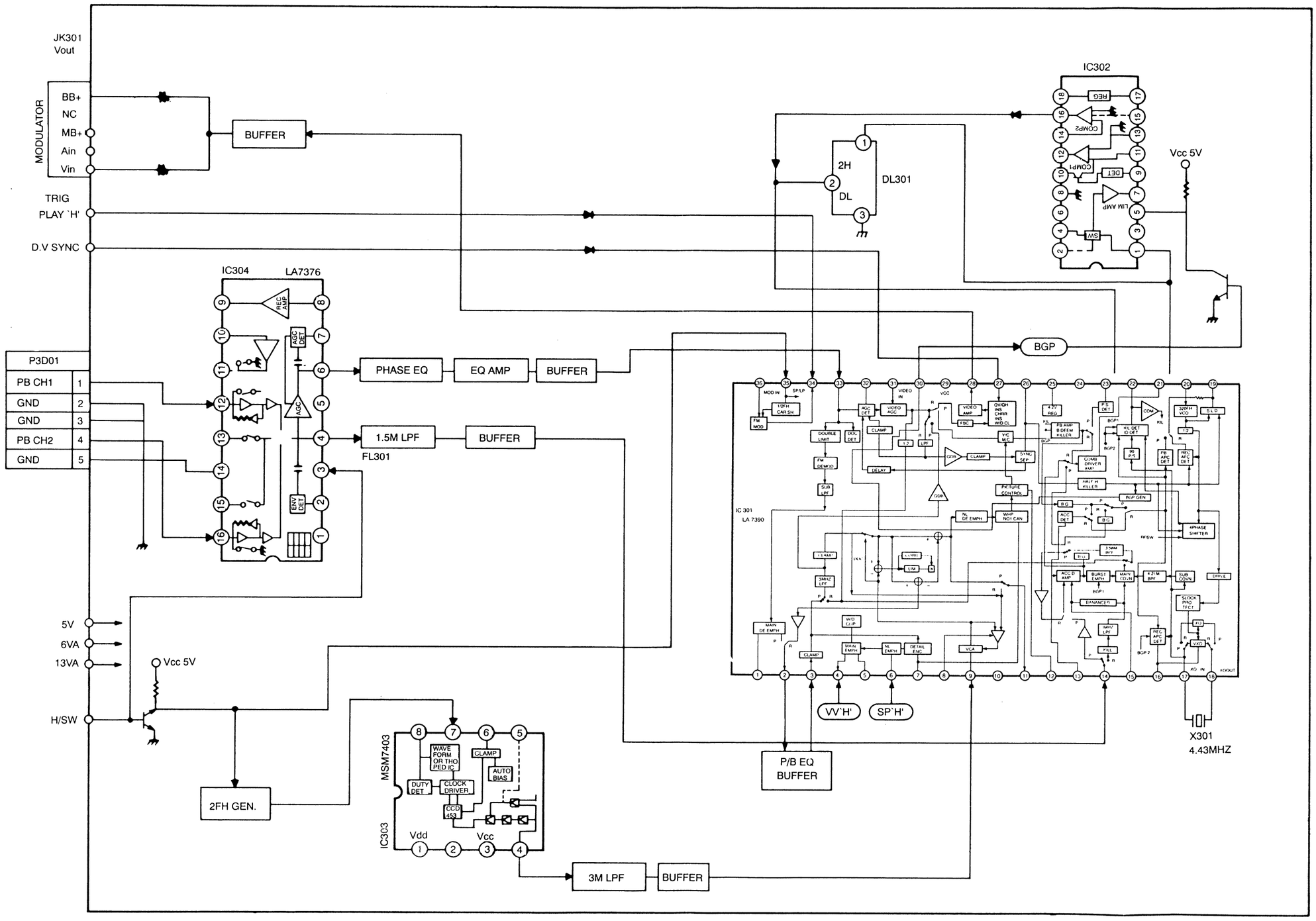




2. Syscon/Servo Block Diagram



3. Y/C Block Diagram



CIRCUIT DIAGRAMS

1. Power Circuit Diagram

NOTE) The components identified by mark ⚠ are critical for safety.
Replace only with part number specified.

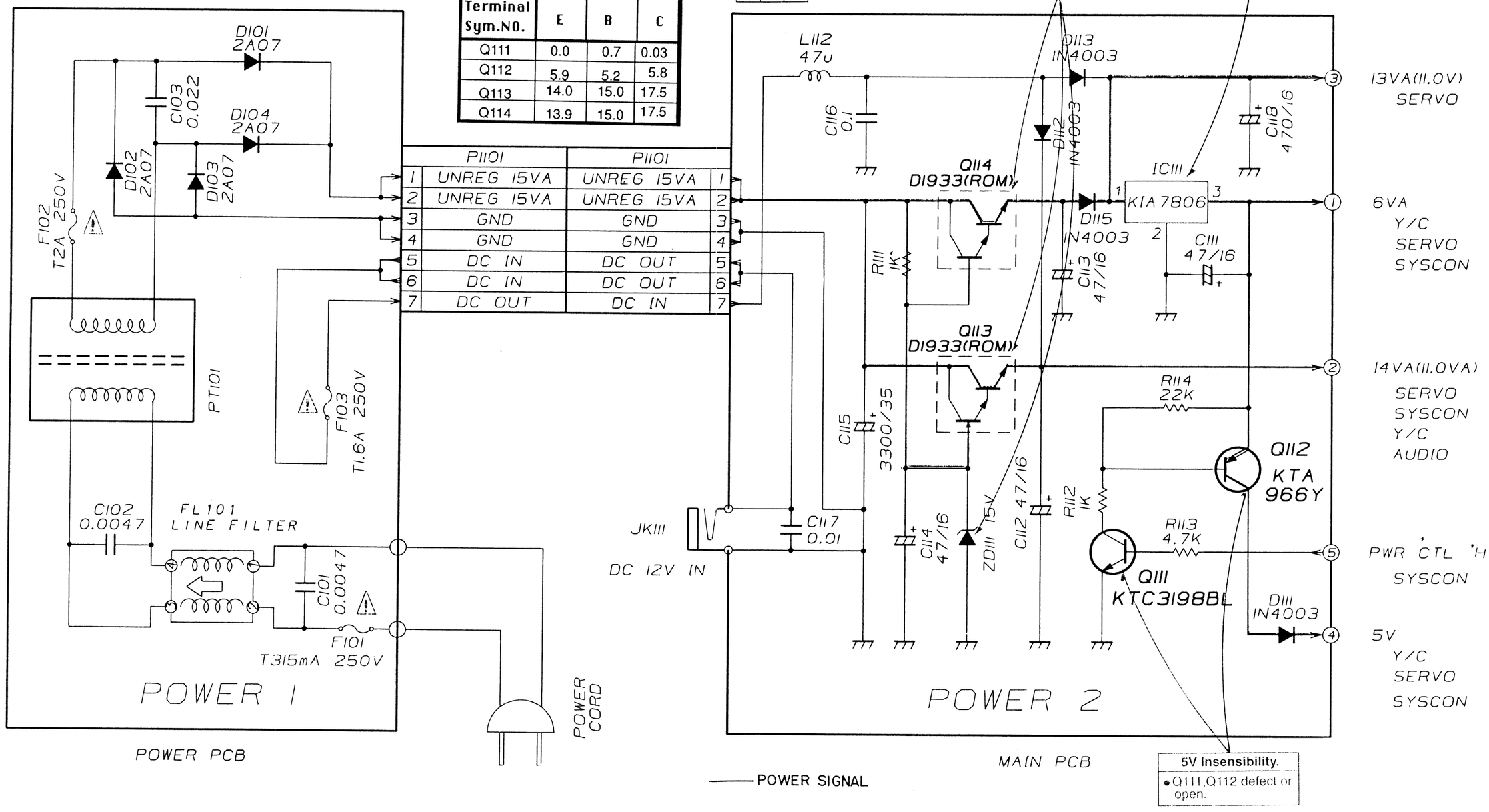
Terminal Sym.NO.	E	B	C
Q111	0.0	0.7	0.03
Q112	5.9	5.2	5.8
Q113	14.0	15.0	17.5
Q114	13.9	15.0	17.5

IC111 AN7806
1
13.9 | 0 | 5.9

14VA Insensibility.
- Q113,Q114,ZD111 defect or open.

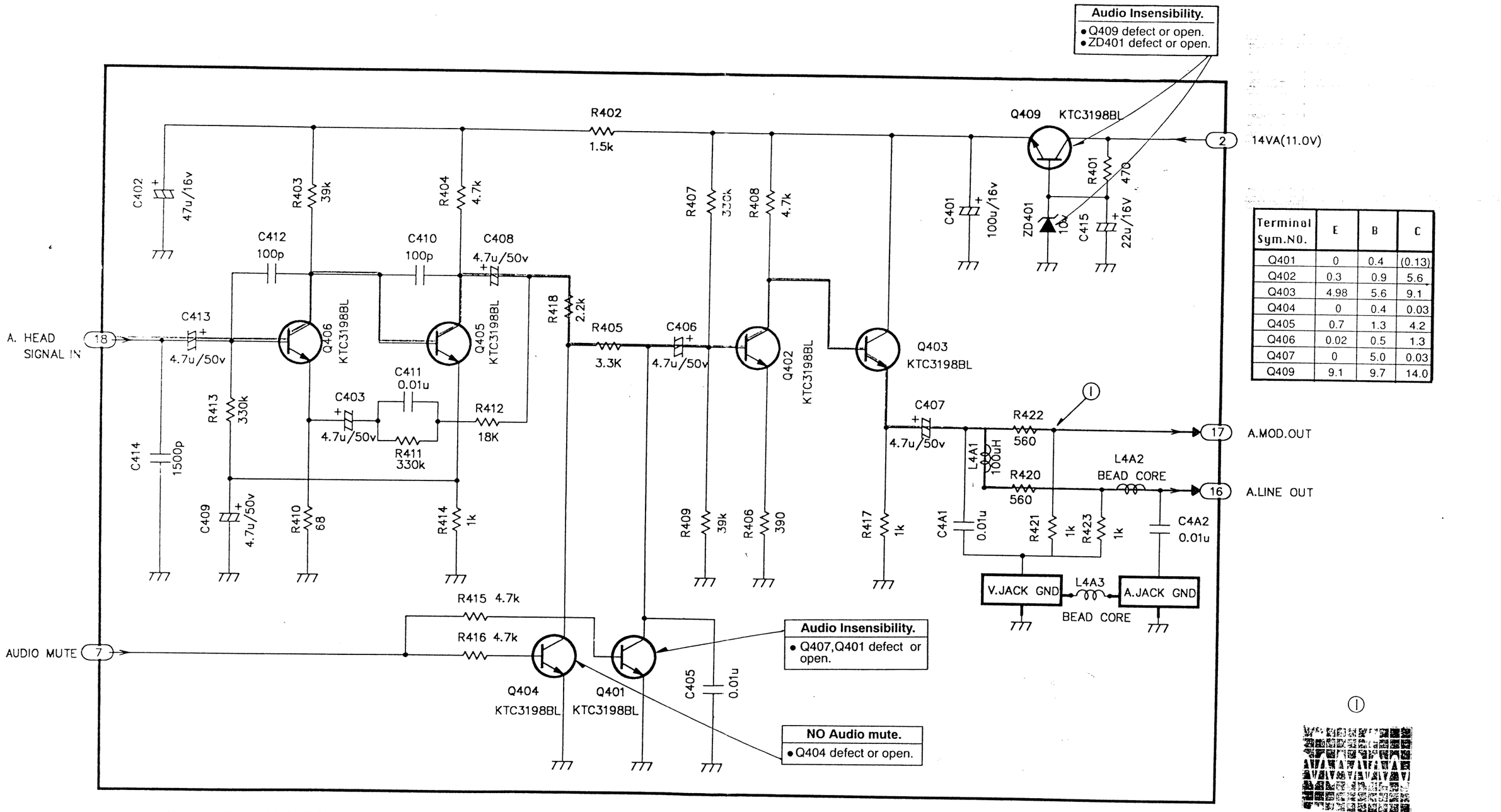
6VA Insensibility.
- IC111 defect or open.

	P1101	P1101	
1	UNREG 15VA	UNREG 15VA	1
2	UNREG 15VA	UNREG 15VA	2
3	GND	GND	3
4	GND	GND	4
5	DC IN	DC OUT	5
6	DC IN	DC OUT	6
7	DC OUT	DC IN	7



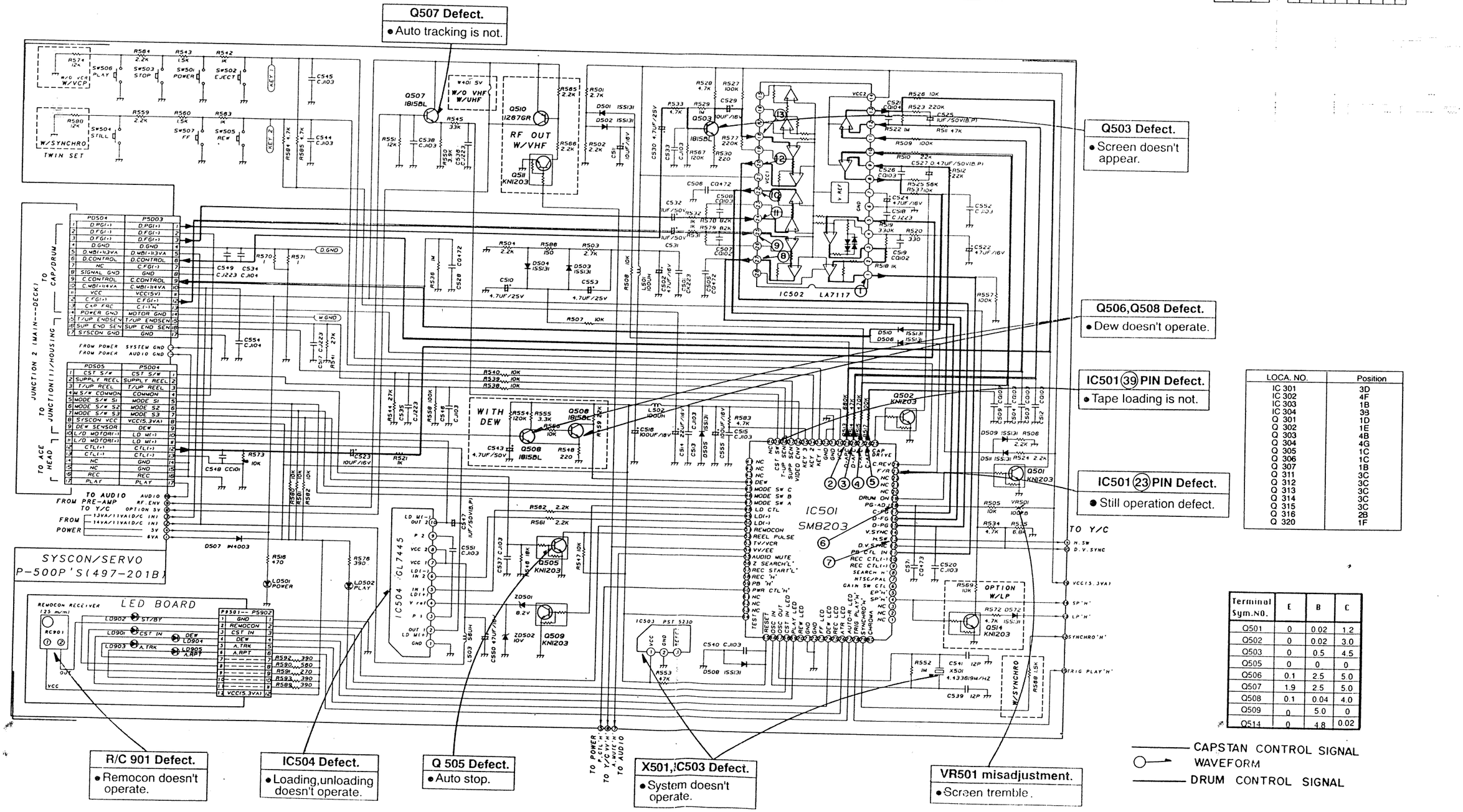
5V Insensibility.
- Q111,Q112 defect or open.

2. Audio Circuit Diagram



Terminal Sym.NO.	E	B	C
Q401	0	0.4	(0.13)
Q402	0.3	0.9	5.6
Q403	4.98	5.6	9.1
Q404	0	0.4	0.03
Q405	0.7	1.3	4.2
Q406	0.02	0.5	1.3
Q407	0	5.0	0.03
Q409	9.1	9.7	14.0

3. Syscon/Servo Circuit Diagram

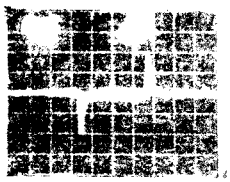


LOCA. NO.	Position
IC 301	3D
IC 302	4F
IC 303	1B
IC 304	3B
Q 301	1D
Q 302	1E
Q 303	4B
Q 304	4G
Q 305	1C
Q 306	1C
Q 307	1B
Q 311	3C
Q 312	3C
Q 313	3C
Q 314	3C
Q 315	3C
Q 316	2B
Q 320	1F

Terminal Sym.NO.	E	B	C
Q501	0	0.02	1.2
Q502	0	0.02	3.0
Q503	0	0.5	4.5
Q505	0	0	0
Q506	0.1	2.5	5.0
Q507	1.9	2.5	5.0
Q508	0.1	0.04	4.0
Q509	0	5.0	0
Q514	0	4.8	0.02

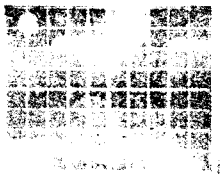
● SYSCON/SERVO Oscilloscope Waveforms

①



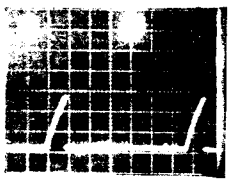
IC 502 PIN ②
500mV/5msec
PB CTL

②, ③, ④, ⑤



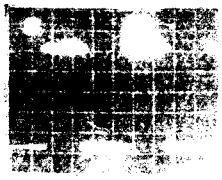
IC 501 PIN ② ~ ⑤
1V/5μ sec
PWM

⑥



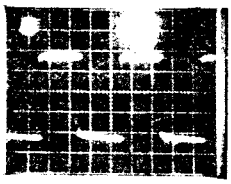
IC 501 PIN ⑱
1V/2msec
PG ADJ.

⑦



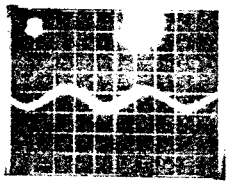
IC 501 PIN ⑬
1V/10msec
H/SW

⑧



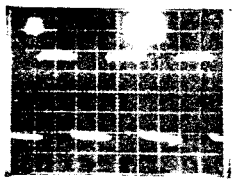
IC 502 PIN ㉗
1V/500μ sec
COFG output

⑨



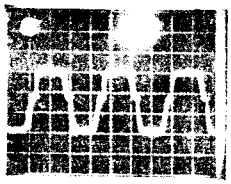
IC 502 PIN ㉕
1V/500μ sec
COFG input

⑩



IC 502 PIN ㉒
1V/500μ sec
D.FG output

⑪

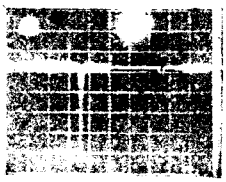


IC 502 PIN ㉔
1V/500μ sec
D.FG input

⑫

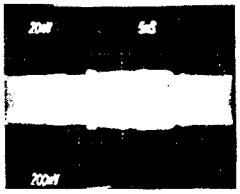
IC 502 PIN ⑳
1V/10msec
D.FG output

⑬

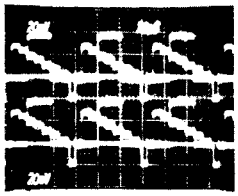


IC 502 PIN ⑱
1V/10msec
D.FG input

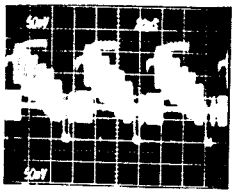
- Y/C Oscilloscope Waveforms

① 

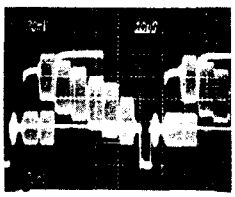
W 350/343
20mV/5mS
PLAYBACK RF

② 

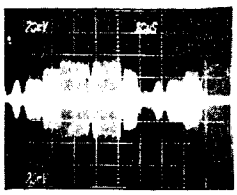
UP: IC 301 PIN ⑨
Down: IC301 PIN ⑪
20mV/20μS
PLAYBACK

③ 

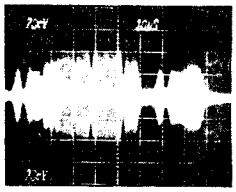
IC 301 PIN ㉘
50mV/20μS
PLAYBACK

④ 

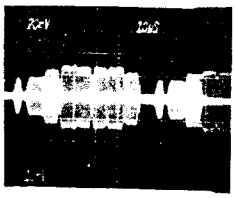
JK 302
20mV/10μS
VIDEO OUT

⑤ 

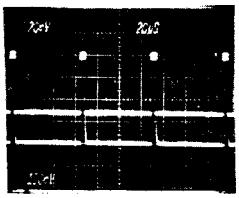
IC 301 PIN ⑭
20mV/10μS
PLAYBACK COLOR

⑥ 

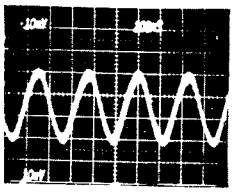
IC 301 PIN ㉑
20mV/10μS
PLAYBACK COLOR

⑦ 

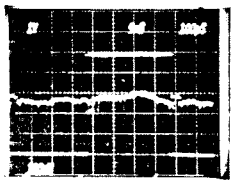
IC 301 PIN ㉓
20 mV/10μS
PLAYBACK COLOR

⑧ 

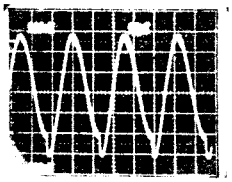
IC 301 PIN ㉚
20mV/20μS
PLAYBACK BGP

⑨ 

IC 301 PIN ⑰
10mV/100ns
PLAYBACK 4.43MHz

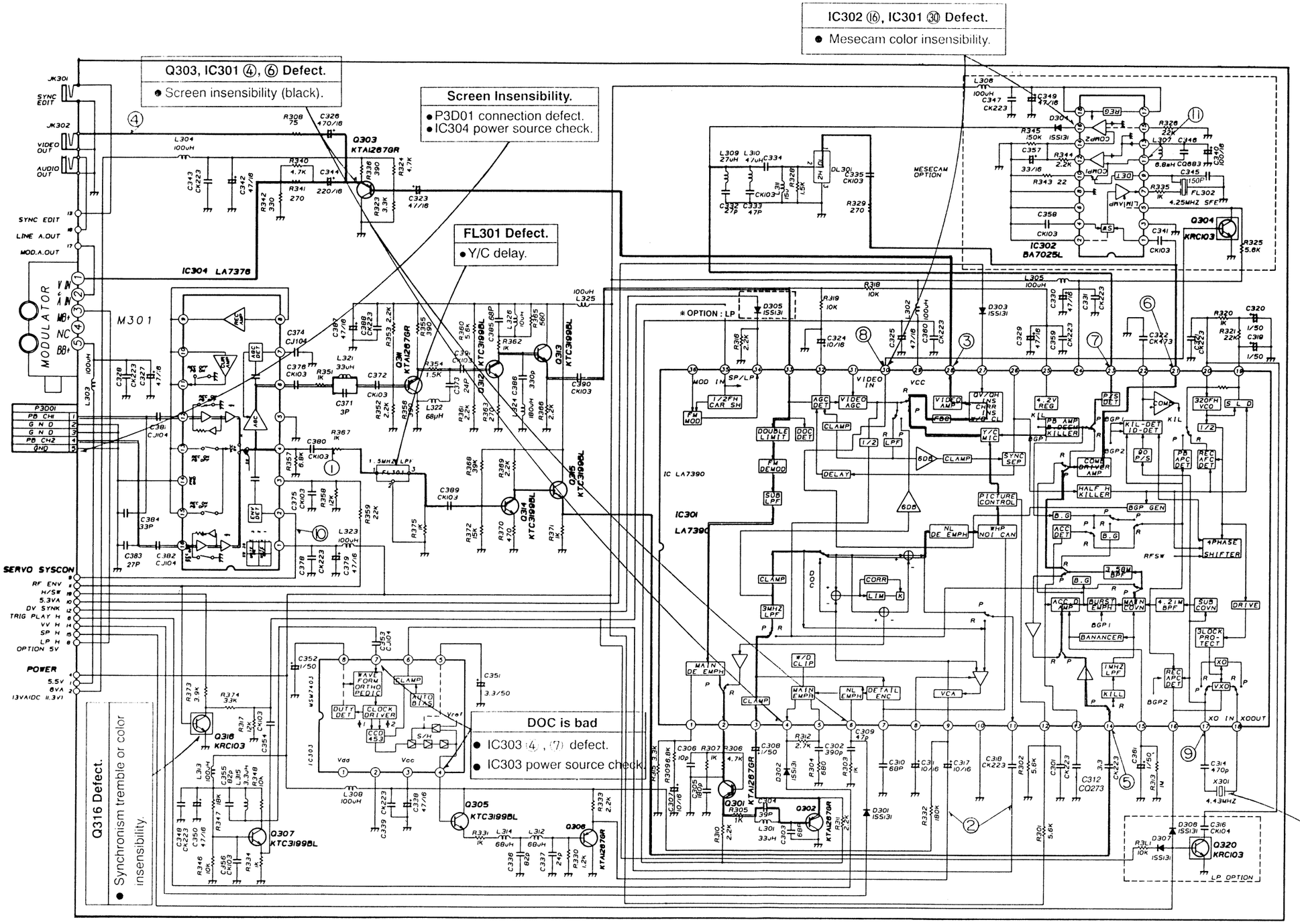
⑩ 

IC 304 PIN ②
100mV/100μS
PLAYBACK RF ENV

⑪ 

IC 302 PIN ⑪
100mV/50μS
PLAYBACK MESECAM

4. Y/C Circuit Diagram



1.94	0.88	3.48	2.06	1.37	3.12	0.59	4.78	1.97	0.25 / 0.35	0.53	4.17	4.79	1.91	1.92	2.8	3.27	3.27
35				30				25				20					

IC301 LA7390

1				5				10				15					
2.12	2.57	2.46	4.64	4.65	4.43	1.27	2.26	3.12	2.22	0	2.06	2.5	1.75	2.84	2.15	2.14	3.55	2.43

5.03	5.03	0	0	(1.1)	3.6	(1.2)	3.59	0.02
15							10	

IC302 BA7025L

1				5				
3.65	0	0	3.65	4.15	0	4.47	0	3.05

8.33	2.52	2.05	2.0
			5

IC303 M7403

1			
0.9	0	4.93	3.38

0.64	0	0	0	0.65	0	0.15	0
15						10	

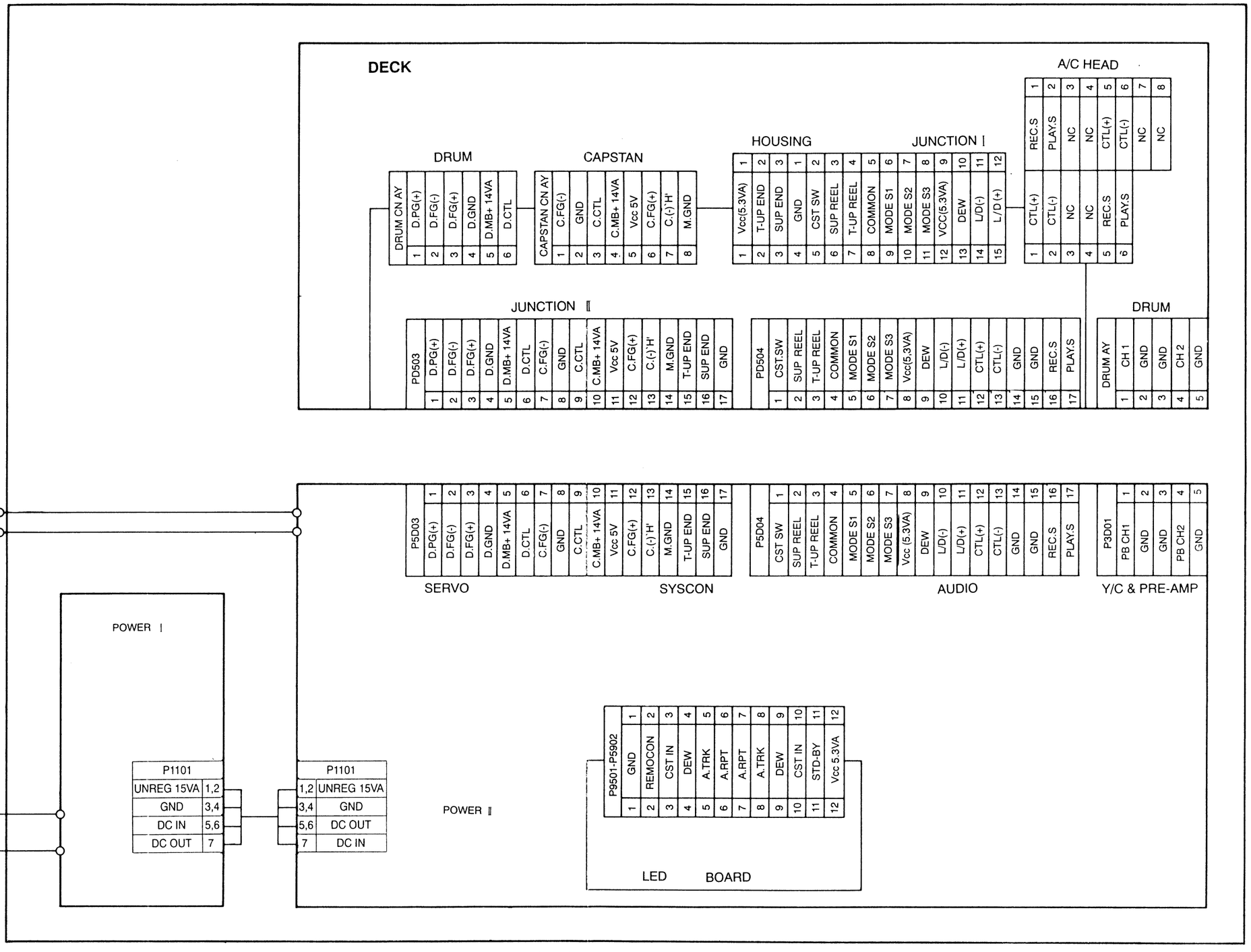
IC304 BA7025L

1				5			
4.99	3.02	0.88	1.93	0	2.46	0.81	1.95

Terminal Sym.NO.	E	B	C
Q301	3.17	2.57	0
Q302	3.74	3.17	0
Q303	6.4	5.77	0
Q304	0.02	0.59	4.15
Q305	2.75	3.37	4.93
Q306	2.0	1.38	0
Q307	1.17	1.78	5.06
Q311	3.15	2.57	1.8
Q312	0.8	1.4	2.5
Q313	2.5	3.1	5.1
Q314	0.78	1.39	1.6
Q315	0.79	1.39	5.1
Q316	0	2.61	5.1

LOCA. NO.	Position
IC 301	3D
IC 302	4F
IC 303	1B
IC 304	4B
Q 301	1D
Q 302	1E
Q 303	4B
Q 304	4G
Q 305	1C
Q 306	1C
Q 307	1B
Q 311	3C
Q 312	3C
Q 313	3C
Q 314	3C
Q 315	3C
Q 316	1B
Q 320	1F

5. Connection Diagram



PRINTED CIRCUIT BOARD DIAGRAMS

1. Main P.C.Board

ABBREVIATIONS
ADJ. (Adjustment)
AGC. (Automatic Gain Control)
CAR. (Carrier)
DEV. (Deviation)
EE. (Electronic to Electronic)
PB. (Play back)
PG. (Pluse Generator)
REC. BIAS (Record Bias)
VIF. (Video Intermediate Frequency)

NOTE) ◉ : Measurement Point
□ : Adjustment Point
Emitter : TRANSISTOR
Collector
Base

LOCA. NO	Position
IC 301	2F
IC 302	1G
IC 303	1F
IC 304	4F
IC 501	4C
IC 502	4D
IC 503	1C
IC 504	2C
Q 111	3F
Q 112	3F
Q 301	2G
Q 302	2G
Q 303	1G
Q 304	1G
Q 305	1F
Q 306	1F
Q 307	1F
Q 311	5F
Q 312	4F
Q 313	4F
Q 314	3F
Q 315	3F
Q 316	4E
Q 320	2F
Q 401	1E
Q 402	1E
Q 403	1A
Q 404	1E
Q 405	1E
Q 406	1E
Q 409	1E
Q 501	4D
Q 502	4D
Q 503	4D
Q 505	1D
Q 506	3D
Q 507	4D
Q 508	3D
Q 509	2C
Q510	1D
Q511	4C
Q514	2D

P5902	
1	GND
2	REMOCON
3	CST IN
4	DEW
5	A.TRK
6	A.RPT
7	A.RPT
8	A.TRK
9	DEW
10	CST IN
11	STD-BY
12	Vcc 5.3VA

P3D01	
PB CH1	1
GND	2
GND	3
PB CH2	4
GND	5

P1101	
UNREG 15VA	1
UNREG 15VA	2
GND	3
GND	4
DC IN	5
DC IN	6
DC OUT	7

P5D03	
D.PG(+)	1
D.FG(-)	2
D.FG(+)	3
D.GND	4
D.MB+14VA	5
D.CTL	6
C.FG(-)	7
GND	8
C.CTL	9
C.MB+14V	10
Vcc 5V	11
C.FG(+)	12
C.(-)'H'	13
M.GND	14
T-UP END	15
SUP END	16
GND	17

P5D04	
CST SW	1
SUP REEL	2
T-UP REEL	3
COMMON	4
MODE S1	5
MODE S2	6
MODE S3	7
Vcc (5.3VA)	8
DEW	9
L/D(-)	10
L/D(+)	11
CTL(+)	12
CTL(-)	13
GND	14
GND	15
REC.S	16
PLAY.S	17

(Component Side)

ABBREVIATIONS
ADJ. (Adjustment)
AGC. (Automatic Gain Control)
CAR. (Carrier)
DEV. (Deviation)
EE. (Electronic to Electronic)
PB. (Play back)
PG. (Pluse Generator)
REC. BIAS (Record Bias)
VIF. (Video Intermediate Frequency)

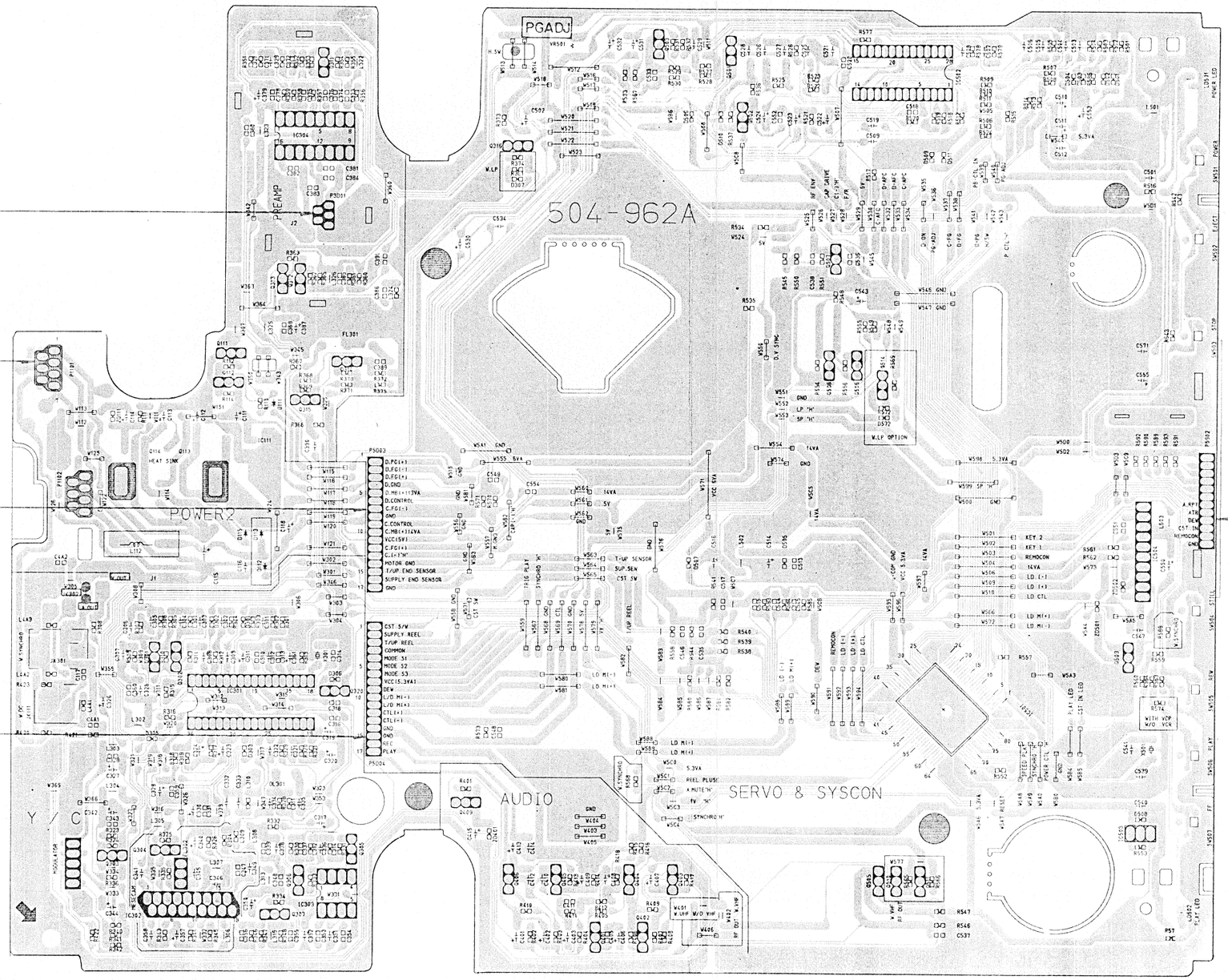
NOTE) ● : Measurement Point
□ : Adjustment Point
Emitter : TRANSISTOR
Collector
Base

P3D01	
PB CH1	1
GND	2
GND	3
PB CH2	4
GND	5

P1101	
UNREG 15VA	1
UNREG 15VA	2
GND	3
GND	4
DC IN	5
DC IN	6
DC OUT	7

P5D03	
D.PG(+)	1
D.FG(-)	2
D.FG(+)	3
D.GND	4
D.MB+13VA	5
D.CTL	6
C.FG(-)	7
GND	8
C.CTL	9
C.MB+14V	10
Vcc 5V	11
C.FG(+)	12
C.(-)'H'	13
M.GND	14
T-UP END	15
SUP END	16
GND	17

P5D04	
CST SW	1
SUP REEL	2
T-UP REEL	3
COMMON	4
MODE S1	5
MODE S2	6
MODE S3	7
Vcc (5.3VA)	8
DEW	9
L/D(-)	10
L/D(+)	11
CTL(+)	12
CTL(-)	13
GND	14
GND	15
REC.S	16
PLAY.S	17

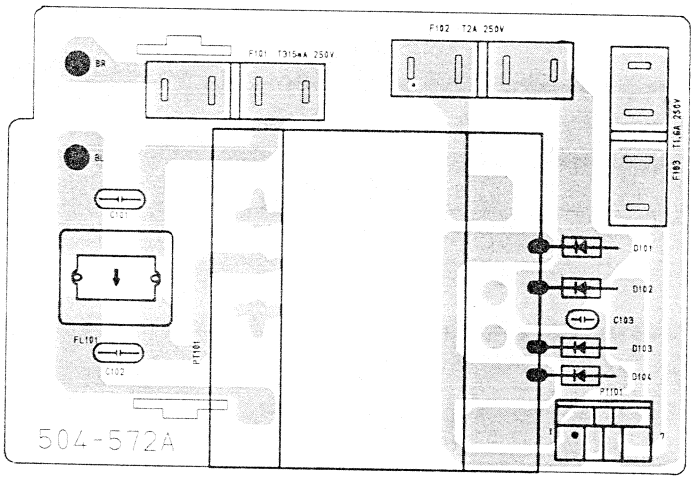


P5902	
1	GND
2	REMOCON
3	CST IN
4	DEW
5	A.TRK
6	A.RPT
7	A.RPT
8	A.TRK
9	DEW
10	CST IN
11	STD-BY
12	Vcc 5.3VA

LOCA. NO	Position
IC 301	2B
IC 302	1B
IC 303	1F
IC 304	4C
IC 501	4F
IC 502	4E
IC 503	1F
IC 504	3F
Q 111	3B
Q 112	3B
Q 301	2B
Q 302	2B
Q 304	1B
Q 305	1C
Q 306	1C
Q 307	1B
Q 311	4C
Q 312	4C
Q 313	4B
Q 314	3C
Q 315	2C
Q 320	1C
Q 401	1D
Q 402	1D
Q 403	1D
Q 404	1D
Q 405	1C
Q 406	1C
Q 409	1C
Q 501	4D
Q 502	4D
Q 503	4D
Q 505	1E
Q 506	3E
Q 507	4E
Q 508	3E
Q 509	2F
Q 510	1E
Q 511	1E

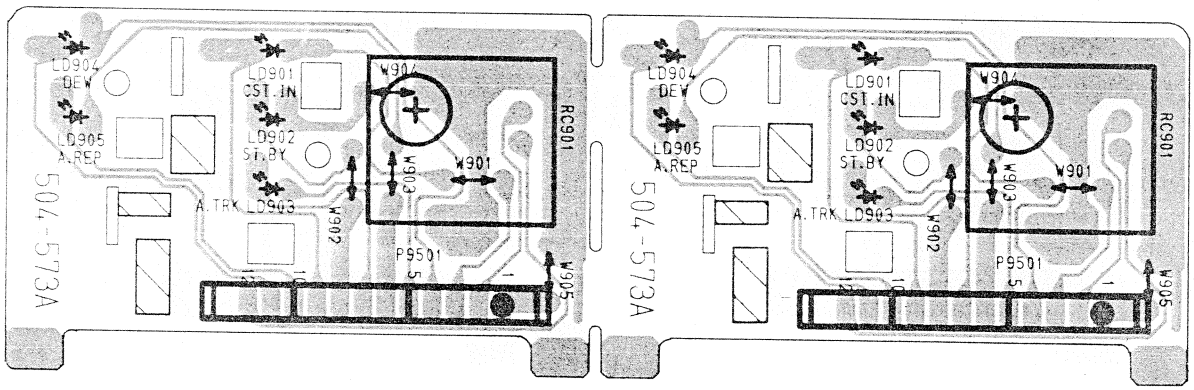
(Solder Side)

2. Power P.C.Board

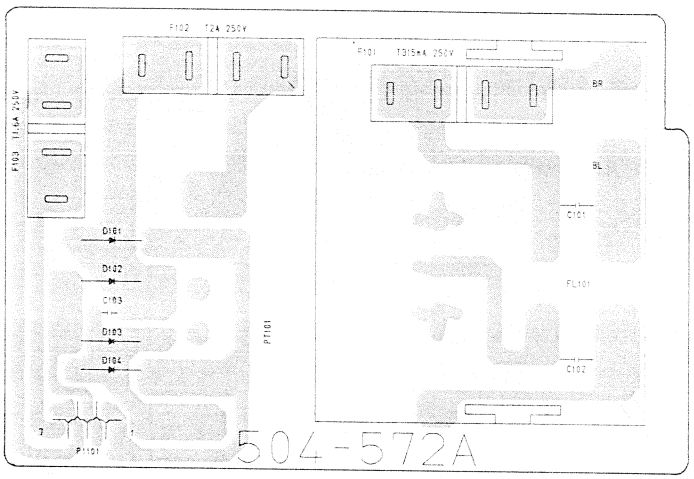


(Component Side)

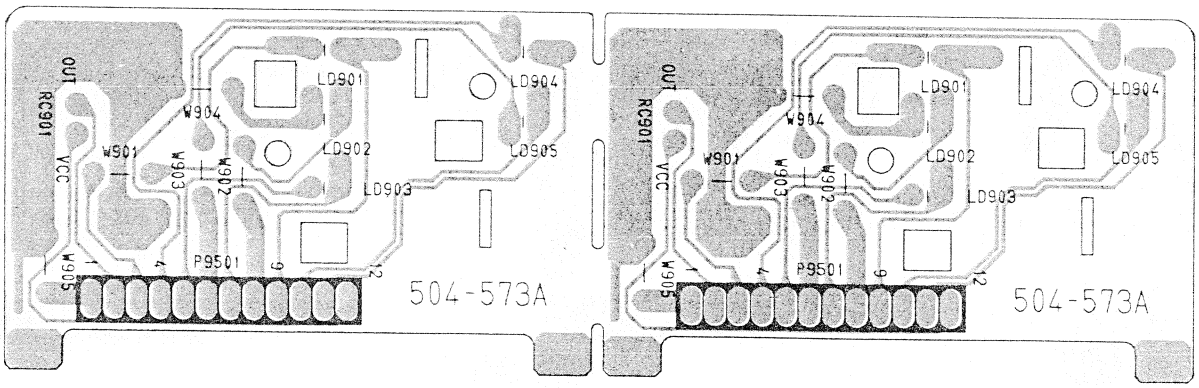
3. LED P.C.Board



(Component Side)



(Solder Side)

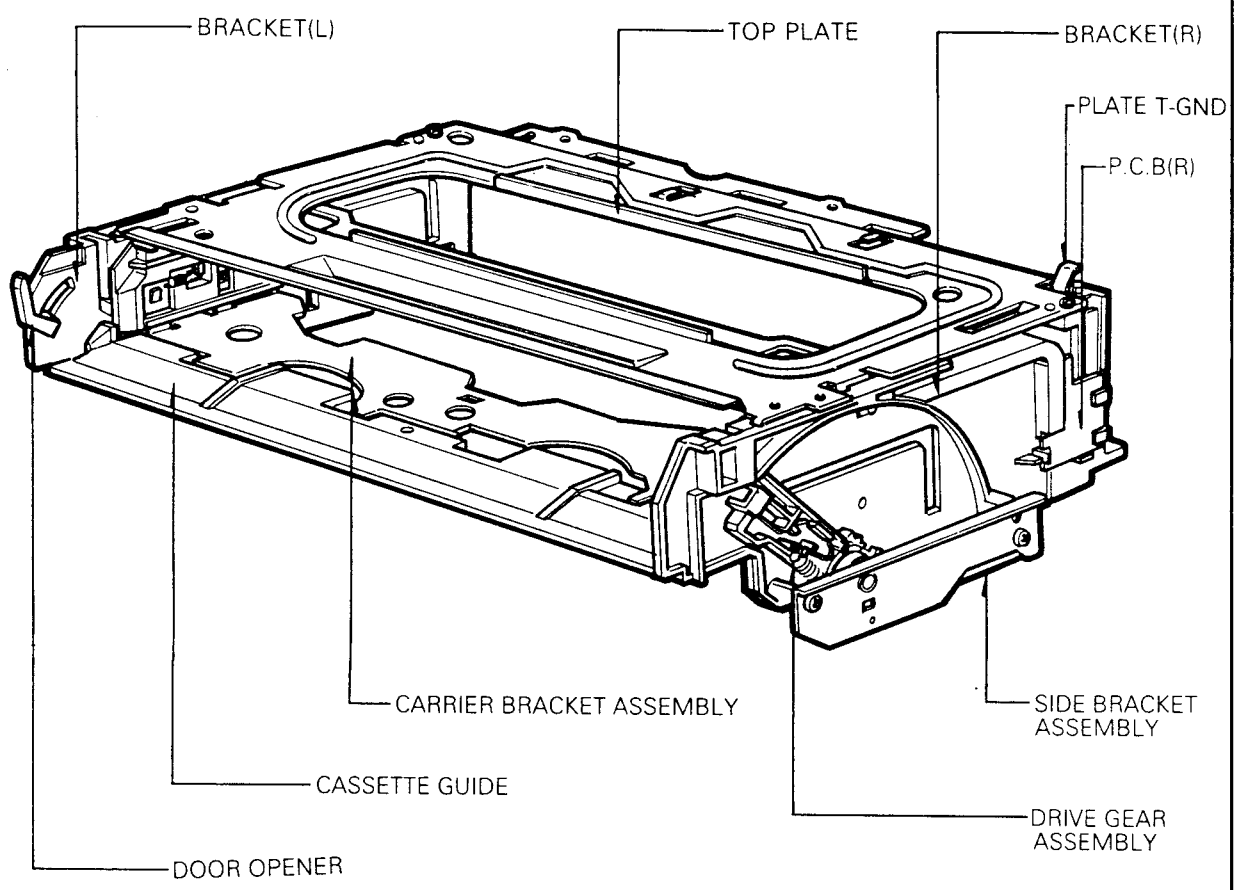


(Solder Side)

SECTION 4
MECHANISM

FRONT LOADING MECHANISM DISASSEMBLY

- **Front Loading Mechanism Parts Location**



Front Loading Mechanism Parts Location

1. Component list below will be discribed as if the top and bottom covers and the front panel have already been removed.
2. P.C.B Assembly
3. Top Plate
4. Carrier Bracket Assembly
5. Cassette Guide
6. Side Bracket Assembly
7. Bracket(L), (R)
8. Door Opener
9. Drive Gear Assembly

1. Front Loading Mechanism Assembly (Fig. A-1-1)

1) Remove the Top and Bottom Covers and the Front panel.
2) Unplug the connector.
3) Remove two screws(A).
4) Lift up the Front Loading Mechanism in the direction of arrow(C).

*** NOTE**

1) When disassembling and reassembling

① Give special attention to removal, because two tabs(D) are engaged.

② Make sure that Bosses of Bracket(L),(R) are properly engaged in the holes of the chassis.

③ To reassemble Front Loading Mechanism, the Drive Gear Assembly should be turned in a counterclockwise as shown in Fig. A-1-2 so that the Rack Gear N.D of Front Loading Mechanism Assembly is meshed into Rack Gear F.L of Deck Mechanism Assembly correctly as shown in Fig. A-1-1.(B).

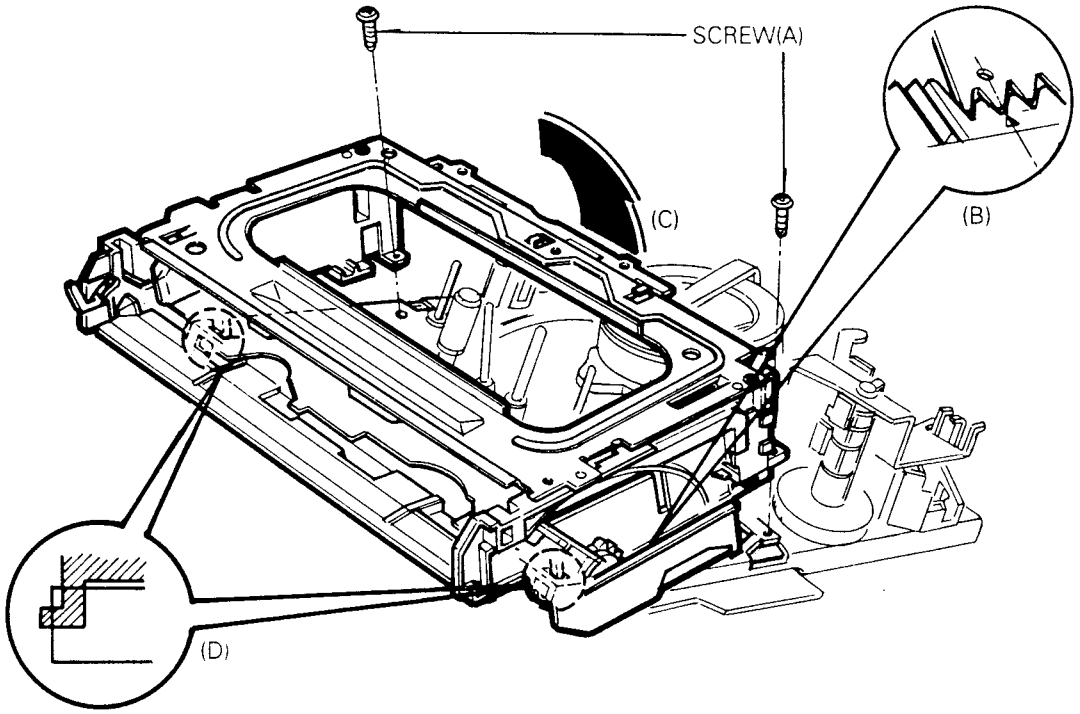
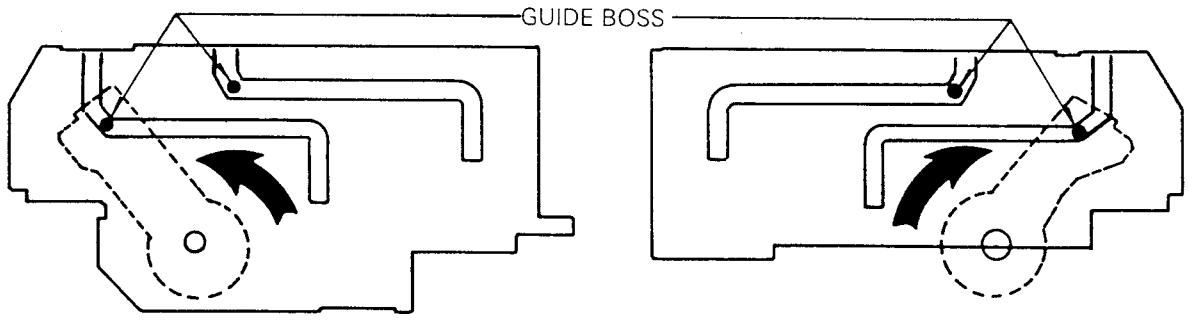


Fig. A-1-1 Front Loading Mechanism Assembly



a) Right Side Bracket

b) Left Side Bracket

Fig. A-1-2 Carrier Bracket Assembly

2. PCB(Printed Circuit Board) Assembly

2-1. P.C.B Assembly(R)(Fig. A-2)

1) Remove the PCB Assembly(R) by pushing three Hooks (A) outward.
2) Release the Lead wire from stoppers.

2-2. PCB Assembly(L).(Fig. A-2)

1) Remove the PCB Assembly(L) by pushing the Hook(B) outward.
2) Release the Lead Wire from stoppers.

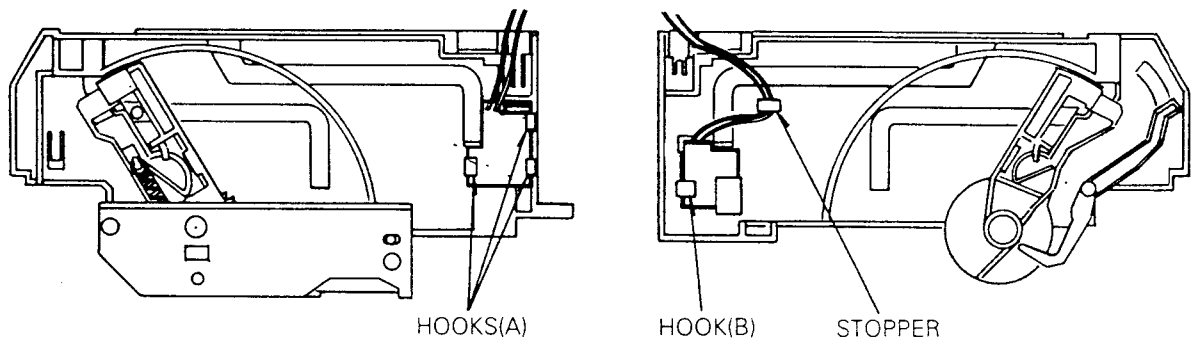


Fig. A-2 PCB Assembly

3. Top Plate(Fig. A-3)

1) Remove two screws(A).
2) Push the upper part of Top plate Ground and then lift up the Top Plate.

*** NOTE**

1) When reassembling, be certain that the tabs(C) of Top Plate is in both Bracket(L),(R).

① Then align the guide holes(D) of Top Plate with Bosses of side Bracket(L),(R).

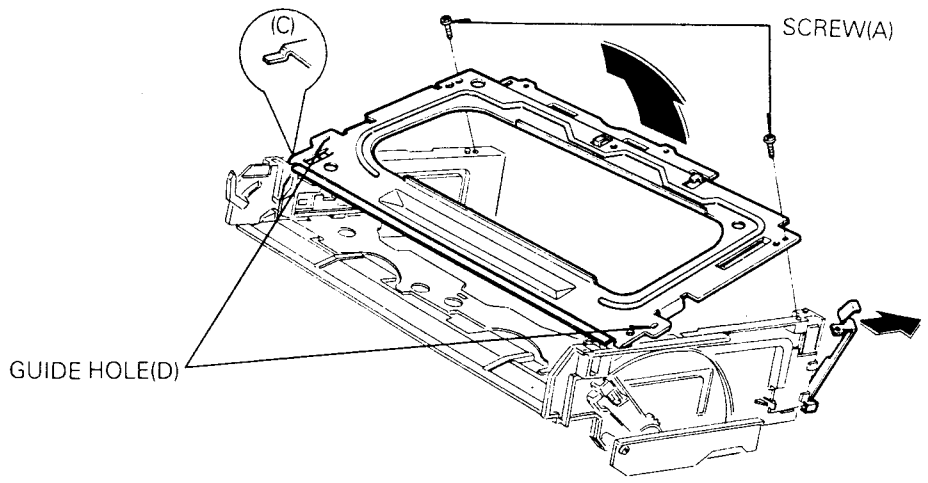


Fig. A-3 Top Plate

4. Carrier Bracket Assembly

4-1. Carrier Bracket Assembly(Fig. A-4-1)

1) Remove the Carrier Bracket Assembly by moving it in the direction of arrow(C).

*** NOTE**

1) When reassembling, be sure that parts(A) of Carrier Bracket Assembly are seated in parts(B) of Bracket(L),(R).

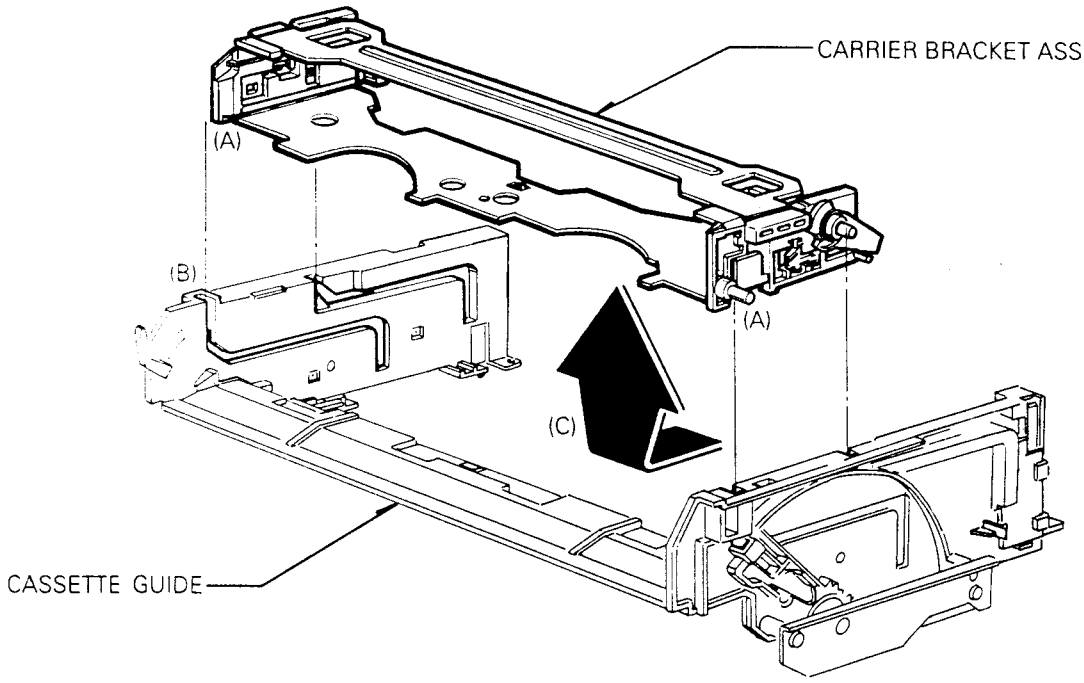


Fig. A-4-1 Carrier Bracket Assembly

4-2. Cassette Opener(Fig. A-4-2)

1) Release the spring O.C from the Hook(A) and then release it from Hook(C) of cassette opener.
2) Remove the cassette opener by releasing the Hook(B) from the Holder(R).

4-3. Lid Opener(Fig. A-4-2)

1) Remove the lid opener by pushing it outward.

*** NOTE**

1) When reassembling, seat the upper part of the lid opener in the grooved of Holder(R) and push it inward.

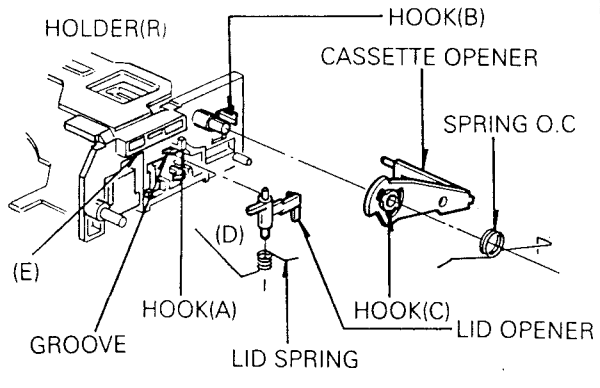


Fig. A-4-2 Cassette Opener/Lid Opener

4-4. Lever and Spring Detect(Fig. A-4-3)

1) Remove the spring detect.
2) Lower the side(A) of Detect Lever and then remove the Detect Lever by pushing it outward.

*** NOTE**

1) When reassembling, make sure that the part(C) of Detect Lever set in the part(B) of Holder(R).

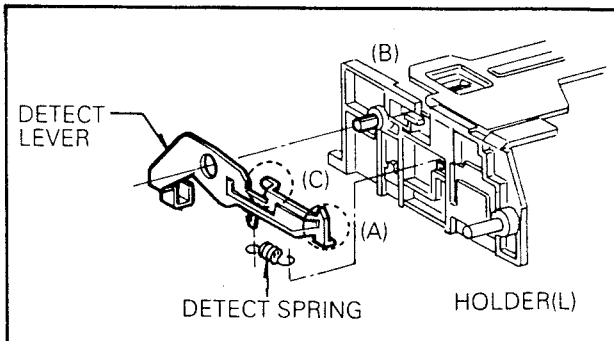


Fig. A-4-3 Lever/Spring Detect

4-5. Support Bracket Assembly (Fig. A-4-4)

1) Take the Support Bracket out by releasing hooks(A),(B).

*** NOTE**

1) When disassembling and reassembling, be careful because heavy force can damage the hooks.

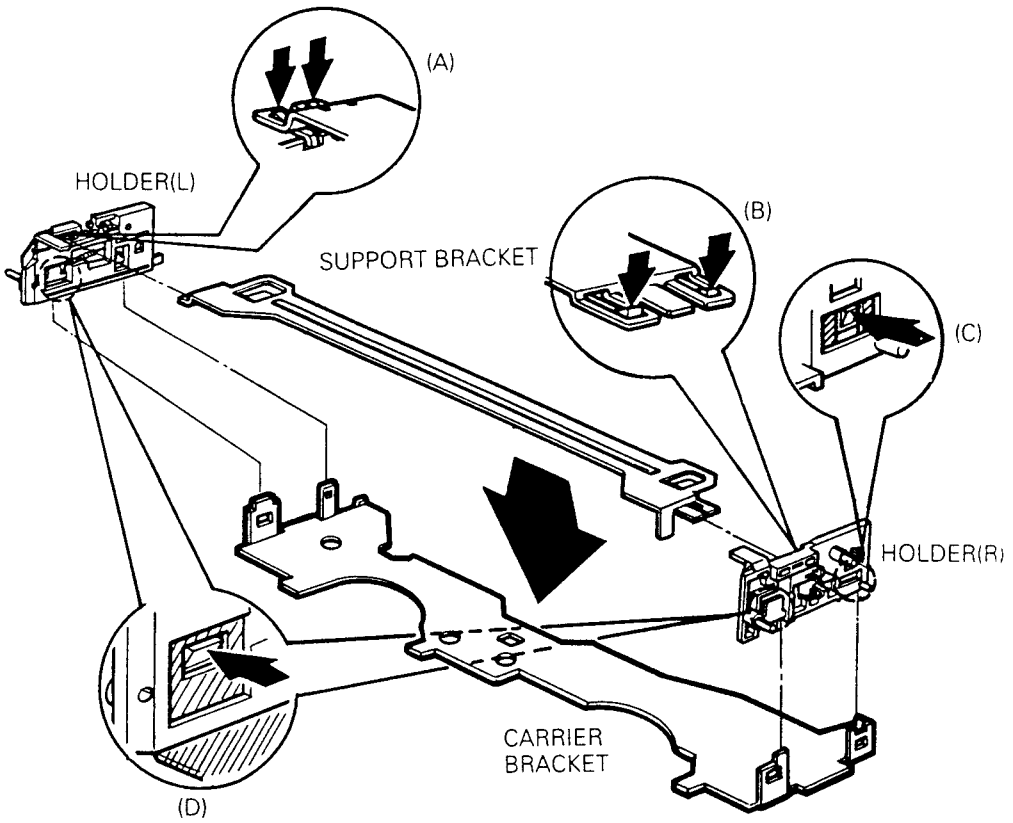


Fig. A-4-4 Support Bracket/Carrier Bracket

4-6. Carrier Bracket Assembly(Fig. A-4-4)

1) Remove the Carrier Bracket by releasing hooks(C),(D).

5. Cassette Guide(Fig. A-5)

1) Remove the Switch Spring with the Front Loading Mechanism Assembly turned over.
2) Push two hooks(B) outward.
3) Remove the Cassette Guide by pushing two hooks(A). outward(if one is removed, the other will be easy to remove)

*** NOTE**

1) When reassembling

① Seat projections(E) of Cassette Guide in holes of Bracket Assembly(L),(R) and then engage the Hook(A).

② After finishing previous step, fix the Cassette Guide to the Bracket Assembly(L),(R) by pushing two hooks(B) inward.

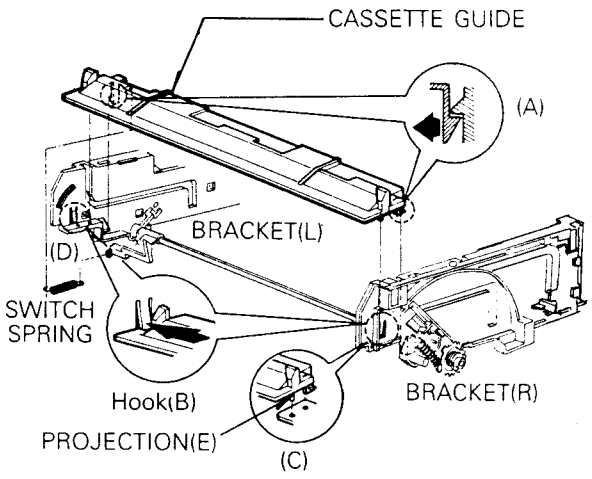


Fig. A-5 Cassette Guide

6. Bracket Side Assembly(Fig. A-6-1)

1) Remove two screws(A) and then remove the Side Bracket Assembly and the Rack Gear N.D.

*** NOTE**

1) When reassembling

① Turn the Drive Gear Assembly in the direction of arrow (C).

② Reassemble the Rack Gear N.D. to the Side Bracket Assembly, as shown in Fig. A-6-2, and then reassemble it to the Bracket Assembly(L), This time the Assembling Figure should be the same as(B) at the rectangular hole of Bracket Side.

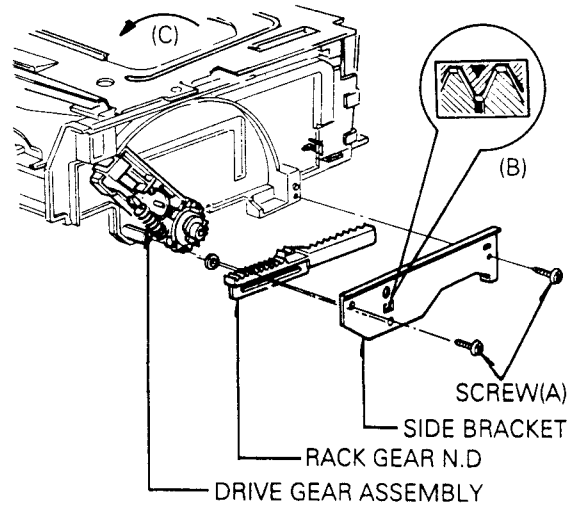


Fig. A-6-1 Bracket Side Assembly

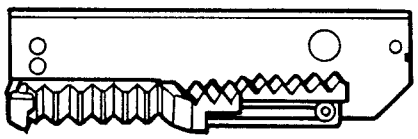


Fig. A-6-2

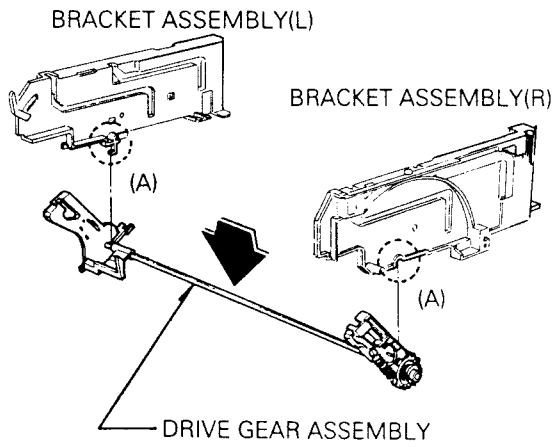


Fig. A-7 Bracket Assembly(L),(R)

7. Bracket Assembly(L),(R)(Fig. A-7)

1) Seperate the Bracket Assembly(L),(R) from the Gear Assembly Drive.

*** NOTE**

1) When reassembling, seat the shaft in the part(A) of Bracket Assembly(L),(R).

8. Door Opener(Fig. A-8)

1) Remove the Door Opener by pushing Hook(A) outward.

*** NOTE**

1) When reassembling, seat the part(B) of Door Opener in the hole( ) of Bracket(L).

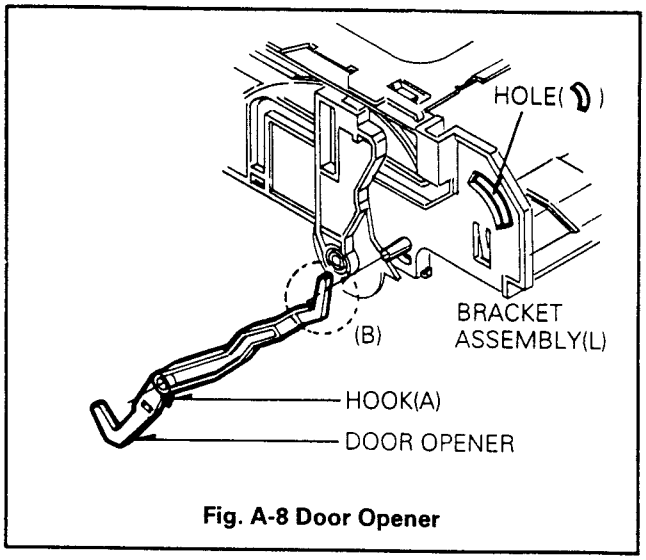


Fig. A-8 Door Opener

9. Drive Gear Assembly

9-1. Drive Gear Assembly(Fig. A-9-1)

1) Remove the Drive Gear Assembly from the Bracket Assembly(L),(R).

9-2. Cushion Spring(Fig. A-9-1)

1) Remove the cushion spring from the Gear R

9-3. Cap-D(Fig. A-9-1)

1) Remove the Cap-D by lifting it up.

9-4. Spring C.C(Fig. A-9-1)

1) Remove the Spring C.C from the Gear R.

9-5. Gear C(Fig. A-9-1)

1) Remove the Gear C by lifting up when the projection of Gear C is aligned with the hole of Gear R while rotating the Gear C in the counterclockwise direction.

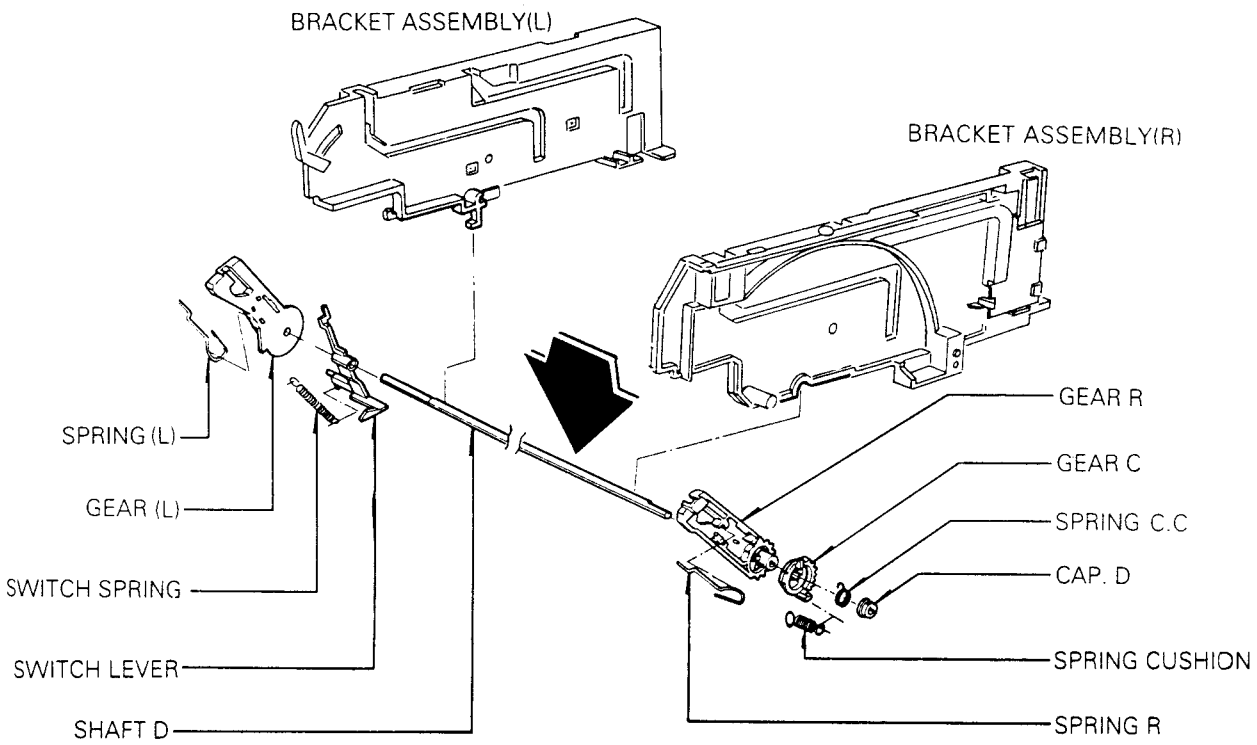


Fig. A-9-1 Drive Gear Assembly

*** NOTE**

1) When reassembling, seat the projections of Gear R in the holes of Gear C when the projection of Gear R is aligned with the hole of Gear C and then keep the Gear C turned in the clockwise direction.

9-6. Gear R(Fig. A-9-1)

1) Lift up the Gear R from the Shaft.

9-7. Spring R(Fig. A-9-2)

1) Remove the Spring R by releasing Hooks.

*** NOTE**

1) When reassembling, be certain Spring R in the part(A) of Gear R.

9-8. Gear L.(Fig. A-9-1)

1) Remove the Gear L from the shaft.

9-9. Spring L (Fig. A-9-2)

1) Remove the Spring L by releasing Hooks from the Gear L.

*** NOTE:** (Refer to the Spring R Section)

9-10. Switch Lever(Fig. A-9-1)

1) Remove the Switch Lever from the shaft.

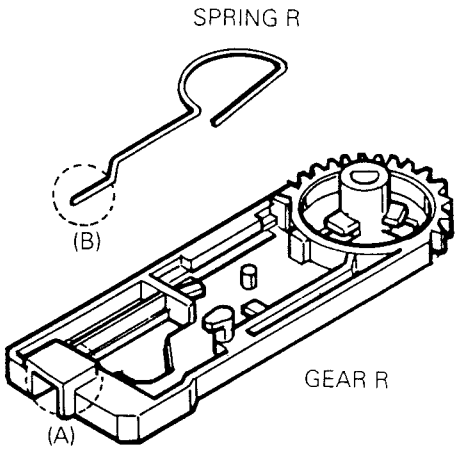
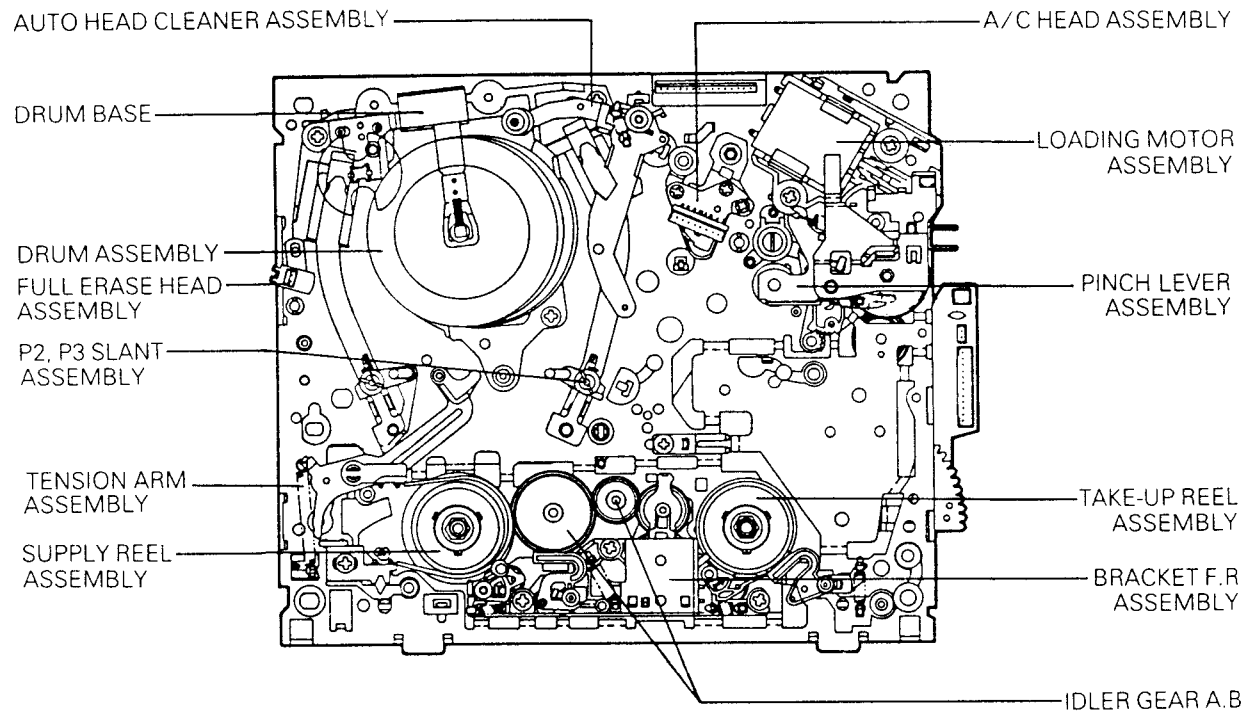


Fig. A-9-2 Spring R

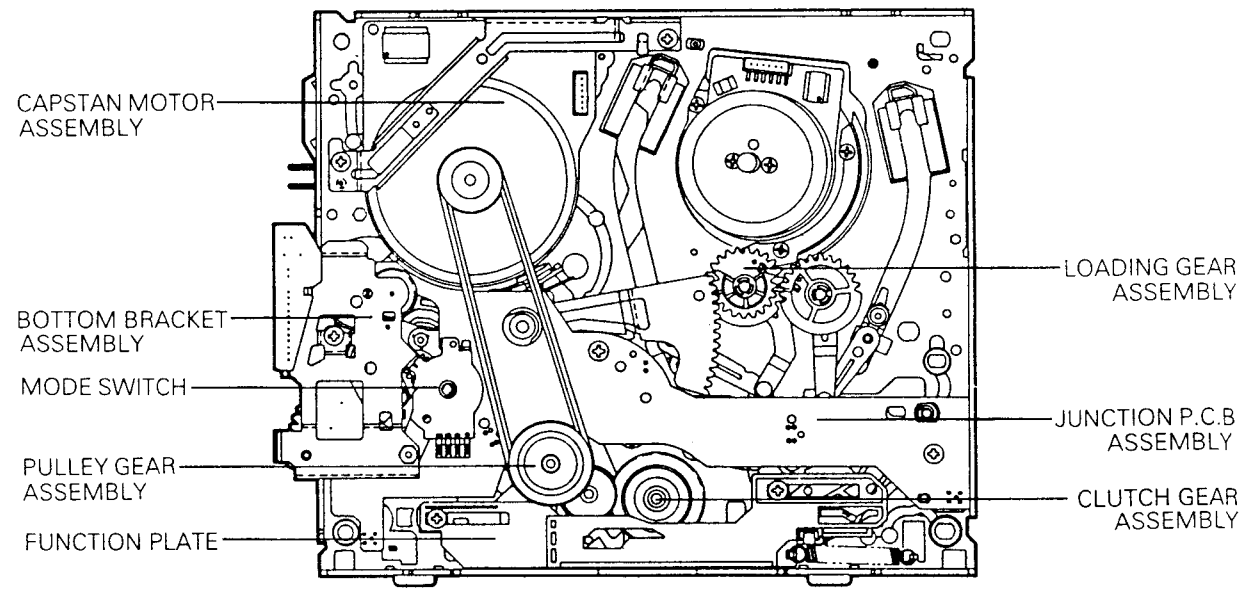
DECK MECHANISM DISASSEMBLY

• Deck Mechanism Parts Location

Top Side



Bottom Side



1. Auto Head Cleaner Assembly (Fig. B-1) (Optional Item)

1) Remove the Cleaner Arm Assembly (Auto Head Cleaner Assembly) by pushing Hook (B) outward.
2) Remove the cleaner Upper spring and then remove the Cleaner Upper Arm Sub Assembly.
3) Remove the Cleaner Spring.

*** NOTE**

1) When reassembling, do not touch the Video Head Tip with fingers or tools.

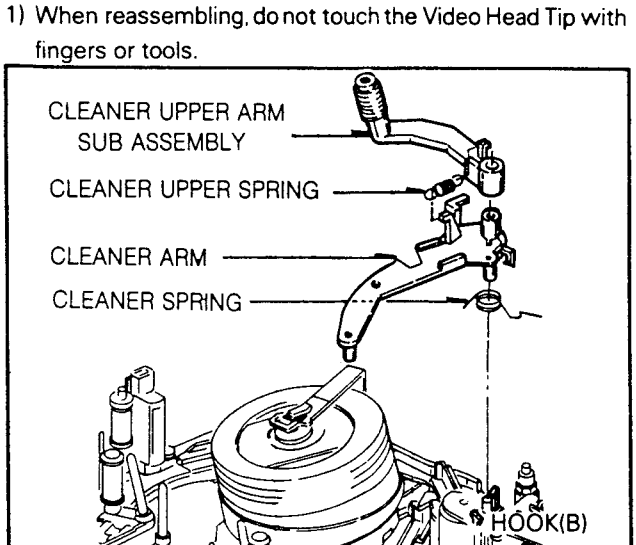


Fig. B-1 Auto Head Cleaner Assembly

2. Drum and Drum Base Assembly(Fig. B-2)

1) Remove the Auto Head Cleaner Assembly.
2) Unplug the connector with the Deck Mechanism Assembly turned over.
3) Loosen the screw(A) and then lift up the Drum Brush.
4) Remove two screws(B) and then lift up the Drum Assembly and Drum Base from the Deck Mechanism Assembly.
5) Separate the Drum Assembly from the Drum Base by Loosening three screws(C) on the back of Drum Base.

*** NOTE**

1) When disassembling and reassembling
① Do not touch the Video Head tip with fingers or tools. (Give special attention to disassembling and reassembling of Auto Head Cleaner Assembly)
② After reinstalling the Drum Brush, the Drum Brush should be aligned with the center of vertical axis of Drum Assembly.
③ After completing the reassembly, adjust the transportation system and the Servo P.G.

3. Upper and Lower Drum Assembly (Fig. B-3)

1) Remove the Drum Assembly and Drum Base from the Deck Mechanism Assembly.
2) Separate the Drum Assembly from the Drum Base.
3) Remove two screws(A).
4) Remove the P.C.B.
5) Separate the upper Drum Assembly from the Lower Drum Assembly.

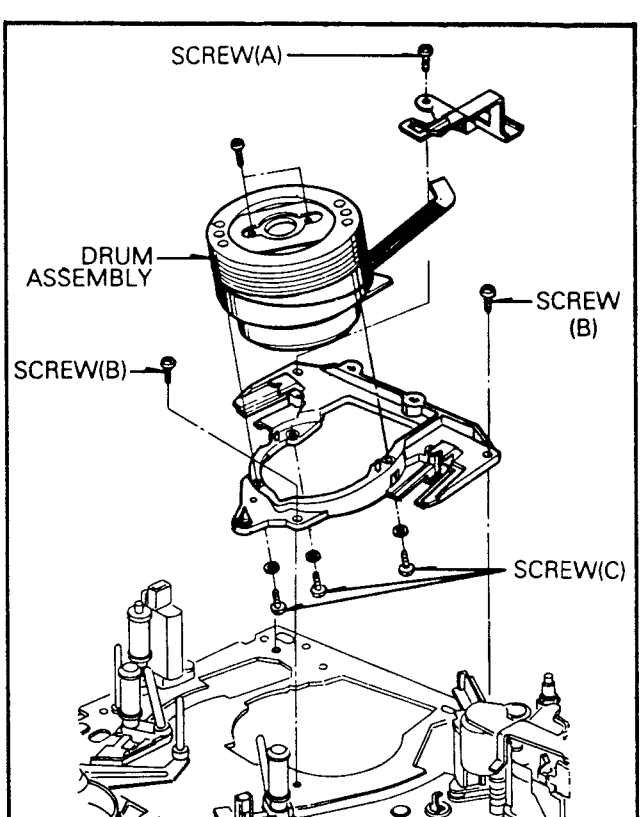


Fig. B-2 Drum/Drum Base Assembly

*** NOTE**

1) When disassembling and reassembling
① Do not touch the Video Head Tip with fingers or tools.
② Make sure that the color(white) marked on the P.C.B of the upper Drum should coincide with the color(Green) marked on the Flange Assembly.

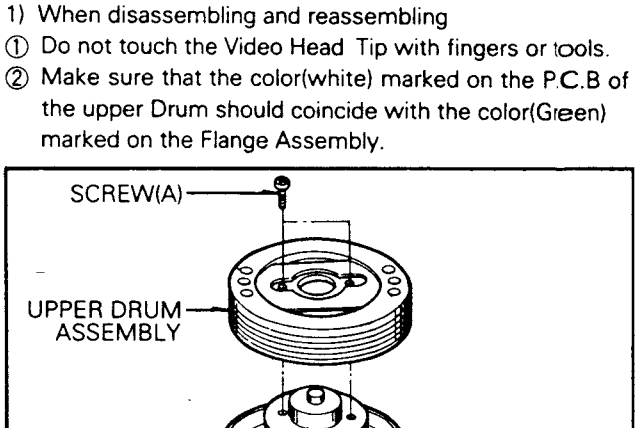


Fig. B-3 Upper/Lower Drum Assembly

4. A/C(Audio/Control) Head Assembly (Fig.B-4)

1) Unplug the connector
2) Remove the Nut(A), and then lift up the A/C Head Assembly.
3) Remove the Azimuth Adjusting Screw.
4) Remove two screws(B),(D) and then separate the A/C Head Assembly from the Base A/C Head Assembly.

*** NOTE**

1) When disassembling
① First of all, release the spring A/C.
② Do not touch the A/C Head Tip with fingers or tools.
③ After reinstalling the Audio Control Head Assembly, adjust the Tilt, Azimuth and Height of A/C Head.

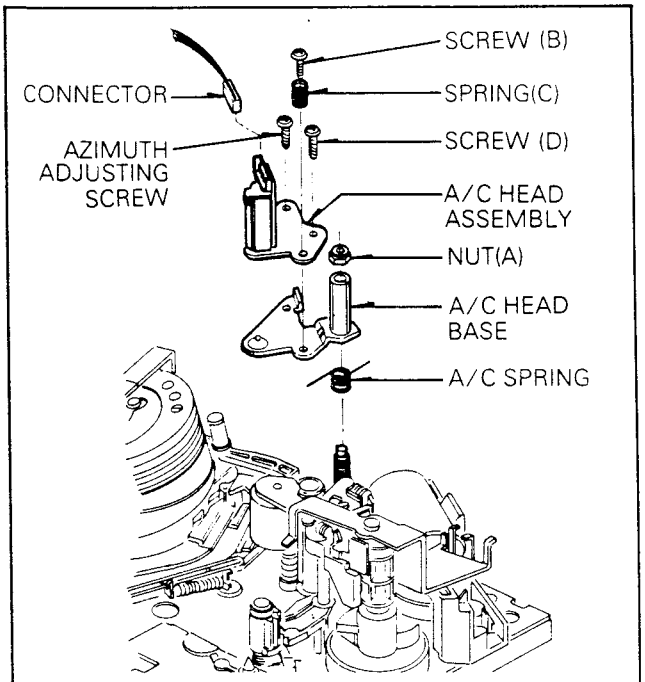


Fig. B-4 A/C Head Assembly

5. Pinch Lever Assembly(Fig. B-5)

1) Remove one Nut, and then remove the Dew Bracket.
2) Lift up Pinch Lever Assembly.
3) Remove the Pinch Spring, and remove the Pinch Lever.
4) Remove the Stopper Spring and remove the Pinch Stopper by lifting it up when the Hook of Pinch Stopper is aligned with the hole of Pinch Arm while rotating the Pinch Stopper in the counterclockwise direction.
5) Remove the Pinch Cap, and then remove the Pinch Roller Assembly.

*** NOTE**

1) When disassembling and reassembling
① Be careful not to get any foreign substance on the Roller.
② When disassembling the Pinch Cap, be careful not to damage the Pinch Arm.

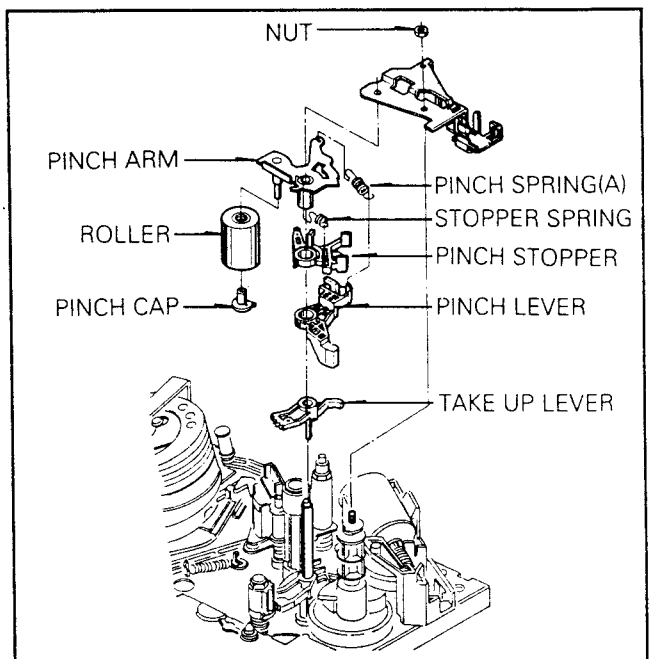


Fig. B-5 Pinch Lever Assembly

6. Loading Motor Assembly(Fig. B-6-1, B-6-2)

1) Remove the Dew Bracket.
2) Unplug the connector from the Junction P.C.B Assembly
3) Remove two screws(A).
4) Remove the worm wheel by pushing it down.
5) Remove the Loading Motor Assembly by pushing(C) and (D) outward.
6) Remove the worm Gear Assembly from the Loading Motor Assembly by pushing it.

*** NOTE**

1) When reassembling
① Make sure that the worm assembly is seated in the axis of Loading Motor.
② Two grooves(G) of Loading Motor should be turned up and two projections(F) of Bracket Assembly should be seated in each at the two holes(E)(Fig. B-6-1).
③ Take notice of the polarity of the Loading Motor.

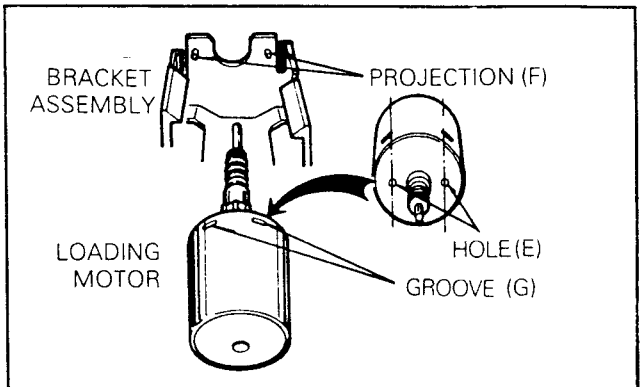


Fig. B-6-1 Loading Motor Assembly

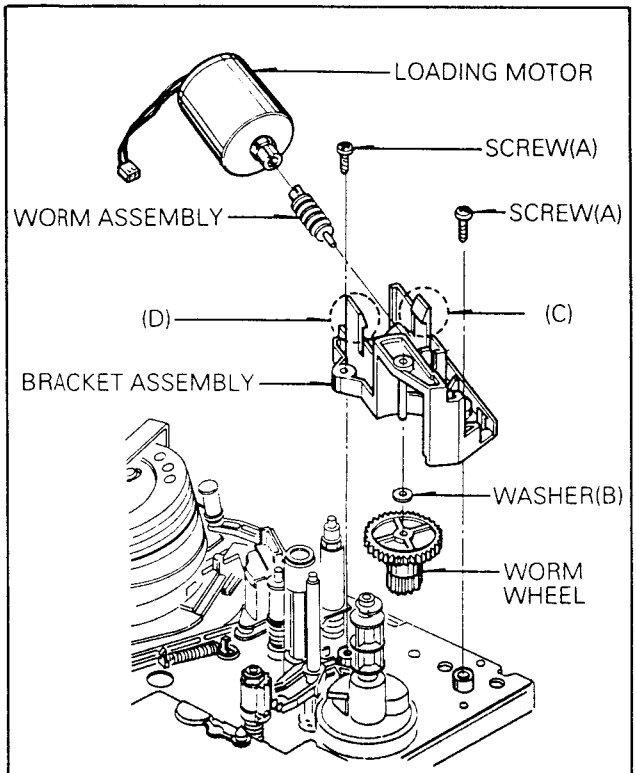


Fig. B-6-2 Loading Motor Assembly

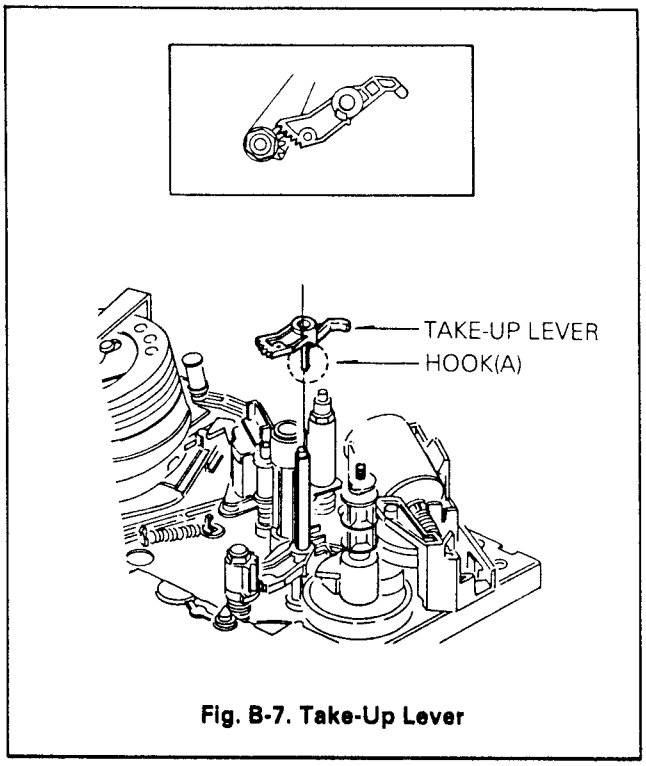


Fig. B-7. Take-Up Lever

7. Take Up Lever(Fig. B-7)

1) Remove the Dew Bracket.
2) Remove the Pinch Lever Assembly.
3) Remove the Take-Up Lever by pushing the hook(A) outward.

*** NOTE**

1) When disassembling and reassembling
① When disassembling the Take-Up Lever, be careful not to break the Hook(A).
② When reassemble the Take-Up Lever,align the appendant Gear of Lever Take-Up with the appendant Gear of Take-up Arm
③ Reassemble the Take-Up Lever completely by hooking (A).

8. Take Up Arm Assembly(Fig. B-8)

1) Remove the Dew Bracket, Pinch Gear, and the Take-Up Lever
2) Remove one Nut(A).
3) Remove the Take-Up Arm Assembly by lifting it up.
4) Remove the spring(B).

*** NOTE**

1) When reassembling
① Align the Gear of Take-Up Arm with the Gear of Take-Up Lever.

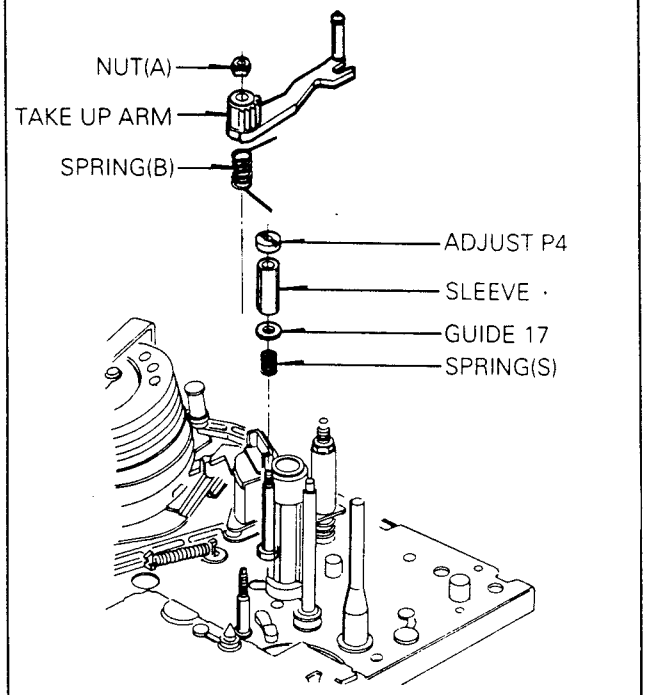


Fig. B-8 Take-Up Arm/P4 Assembly

9. P4 Assembly(Fig. B-8)

1) Remove the Adjust P4.
2) Remove the Sleeve.
3) Remove the Guide 17.
4) Remove the Spring

10. Pinch Gear

1) Remove one Nut(A) and then remove the Dew Bracket.
2) Remove the Pinch Lever Assembly by lifting it up.
3) Remove the Loading Motor Assembly.
4) Remove the Take Up Lever.
5) Remove the Pinch Gear Assembly.

*** NOTE**

1) When reassembling, align the hole(A) of Pinch Gear with the hole of chassis, and the hole(C) of Pinch Gear with the groove(D) of the P.C.Gear. Hole(E) of chassis should be aligned with the hole of P.C.Gear.

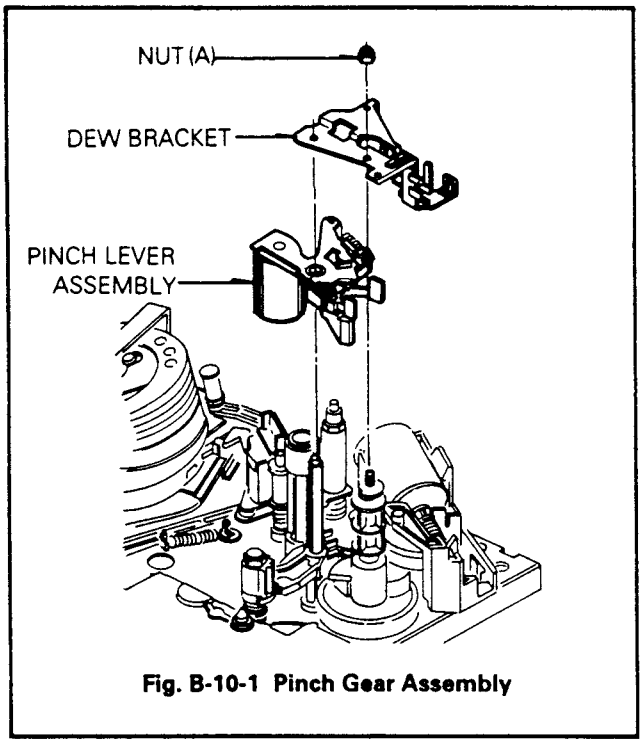


Fig. B-10-1 Pinch Gear Assembly

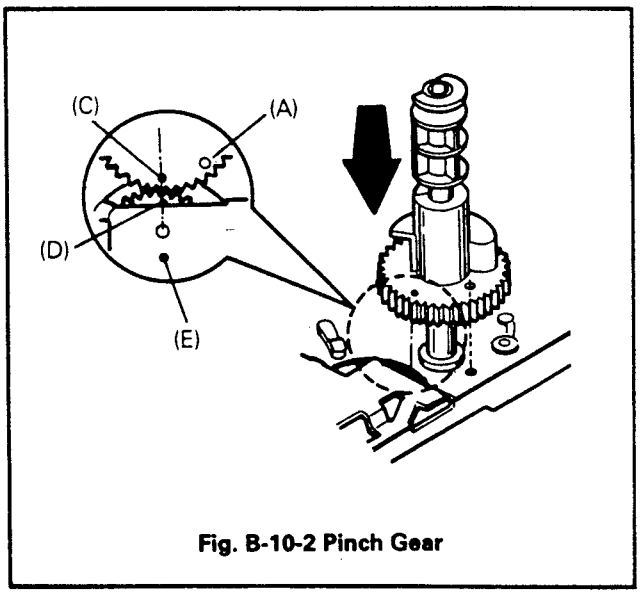


Fig. B-10-2 Pinch Gear

11. FE(Full Erase) Head Assembly(Fig. B-11) (Optional Item)

1) Unplug the connector.
2) Remove one screw(A), and then remove the FE Head.

*** NOTE**

1) When disassembling and reassembling
   ① Do not touch the Video Head Tip with fingers or tools.

12. P1 Assembly(Fig. B-11)

1) Remove the Stopper p1.
2) Remove the Roller p1.
3) Remove the Sleeve p1.
4) Remove the Guide 17.

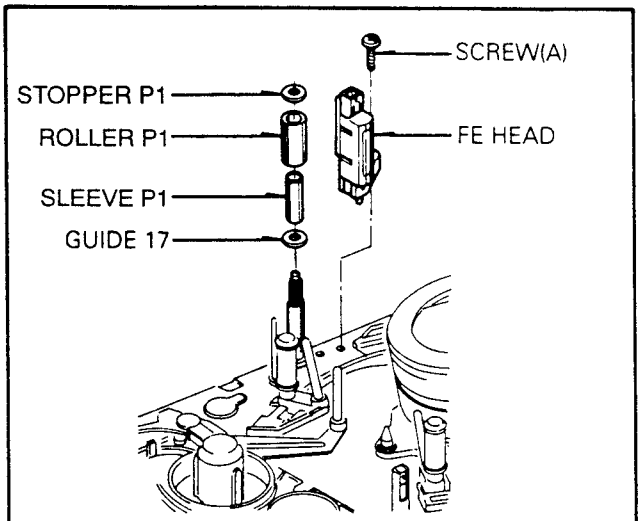


Fig. B-11 FE Head/P1 Assembly

13. Tension Arm Assembly(Fig. B-13)

1) Remove one screw(C).
2) Remove the Tension Spring.
3) Remove the Tension Arm Assembly by pushing hooks outward with the Deck Mechanism Assembly turned over.
4) Remove the Tension Band Assembly from the Tension Arm by pushing Hooks of Holder(A).

*** NOTE**

1) When disasembling and reassembling, give special attention to the disassembling and reassembling of Tension Arm Assembly, because the Tension Band is interposed between the Supply Reel and the Soft Brake.

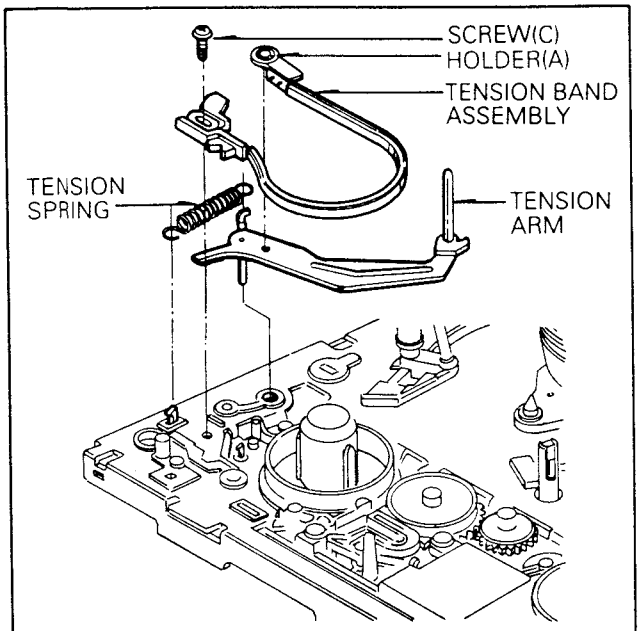


Fig. B-13 Tension Arm Assembly

14. Supply Main and Supply Soft and Take-up Main Brake Assembly

1) Supply Soft Brake(SSB)
   ① Remove the SSB Spring.
   ② Remove the SSB.
2) Supply Main Brake(SMB)
   ① Remove the SMB Spring.
   ② Remove the SMB.
3) Take Up Soft Brake(TSB)
   ① Remove the TSB Spring.
   ② Remove the TSB.
4) Take-Up Main Brake(TMB)
   ① Remove the TMB Spring.
   ② Remove the TMB.

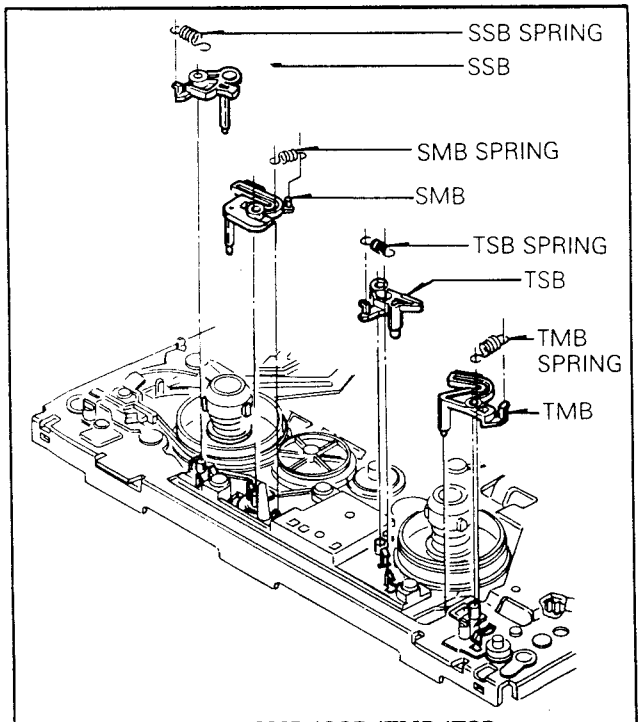


Fig. B-14 SMB/SSB/TMB/TSB

15. Bracket F/R(FF/Rewind) Assembly (Fig. B-15)

1) Remove the TMB.
2) Remove the Washer(A), and then remove the Gear F.R.
3) Remove three screws, and then remove Bracket F/R Assembly from the Deck Mechanism Assembly.
4) Remove the Washer(B), and spring Up/D, and then remove the Gear Up/D.
5) Remove the shaft(C), and then remove the Arm F.R, Lever F.R and Spring F.R.

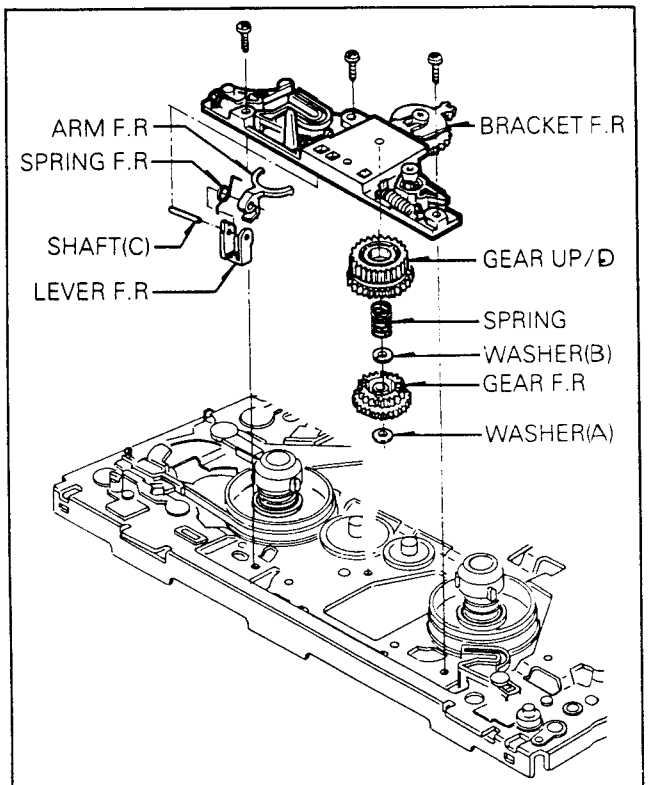


Fig. B-15 Bracket F/R Assembly

16. Supply Reel Assembly(Fig. B-16)

1) Remove the Tension Band Assembly.
2) Remove the Bracket F/R.
3) Lift up the Supply Reel Assembly from the Deck Mechanism Assembly.
4) Separate the Reel Cap from the Supply Reel by taking it out of Hooks(A).

17. Take Up Reel Assembly (Fig. B-16)

1) Remove the TMB(Fig. B-14)
2) Lift up the Take-up Reel Assembly from the Deck Mechanism Assembly.
3) Separate the Reel Cap and Spring from the Take-Up Reel by releasing Hooks(S).

*** NOTE**

1) When reassembling

① Make sure that the Supply and Take Up Reel are not exchanged.

② After reinstalling the Supply Reel Assembly, Adjust the Tension.

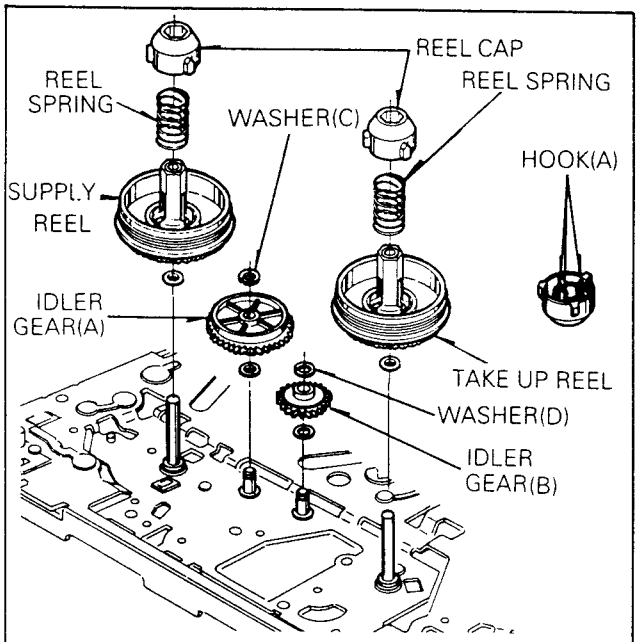


Fig. B-16 Supply Reel/Take Reel/Idler Gear(A),(B)

18. Idler Gear (A),(B) (Fig. B-16)

1) After removing the Supply Reel, and supply Main Brake Assembly, remove the washer(C) and remove the Idler Gear(A).
2) Remove the Washer(D) and remove the Idler Gear(B).

19. Pulley Gear Assembly (Fig. B-19)

1) Turn over the Deck Mechanism Assembly.
2) Remove the Capstan Belt.
3) Remove the Washer(A) and lift up the Pulley Gear.

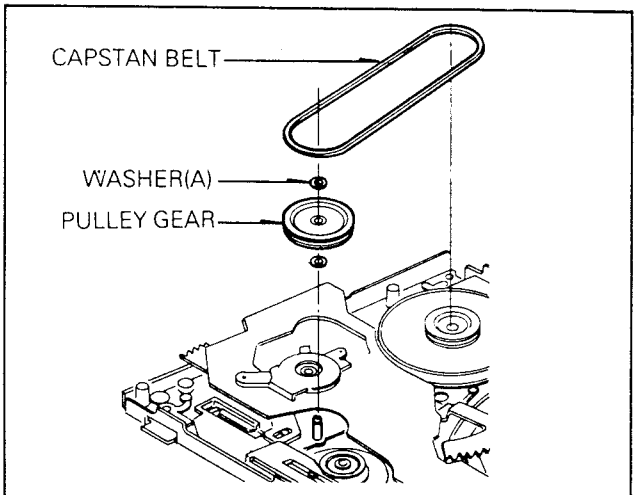


Fig. B-19 Pulley Gear Assembly

20. Bracket Bottom Assembly (Fig. B-20)

1) Remove one screw(A).
2) Remove one Hexagonal Nut, and then lift up the Bracket Bottom Assembly.
3) Remove one Washer, and lift up the Ratchet Gear 1.
4) Remove the washer, and then remove Ratchet Gear 3 from the Bottom Bracket.

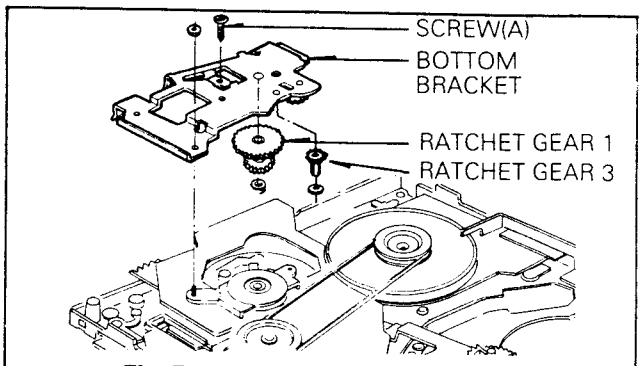


Fig. B-20 Bracket Bottom Assembly

21. Junction PCB (Printed Circuit Board) Assembly (Fig. B-21-1)

1) Remove the Bottom Bracket Assembly.
2) Remove two screws(A),(B) and then remove the Junction P.C.B Assembly.
3) Remove the Mode Switch from the Junction P.C.B Assembly.
4) Remove the Reel Sensors, Sensor LEDS and each holder from the Junction P.C.B(Fig. B-21-2).

*** NOTE**

1) When reassembling the Mode Switch, the groove(V) and (U) of Mode Switch should be at their original place in the Eject Mode.

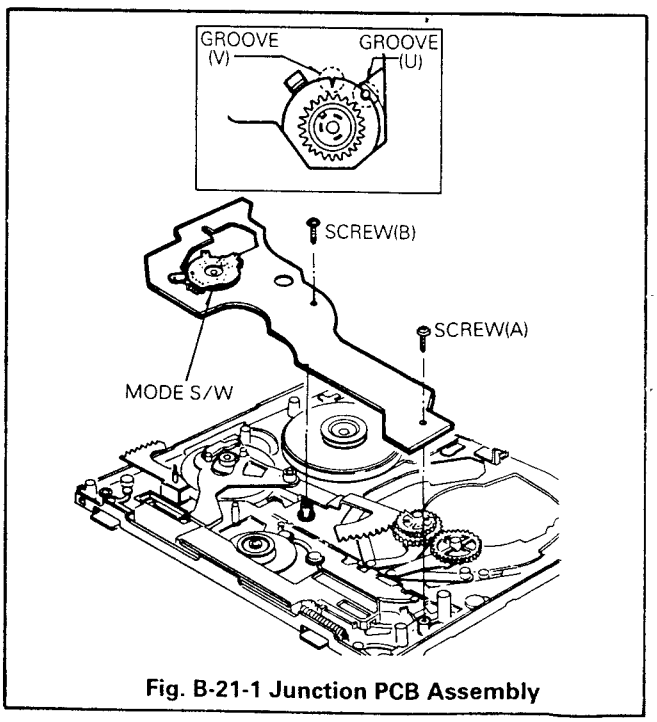


Fig. B-21-1 Junction PCB Assembly

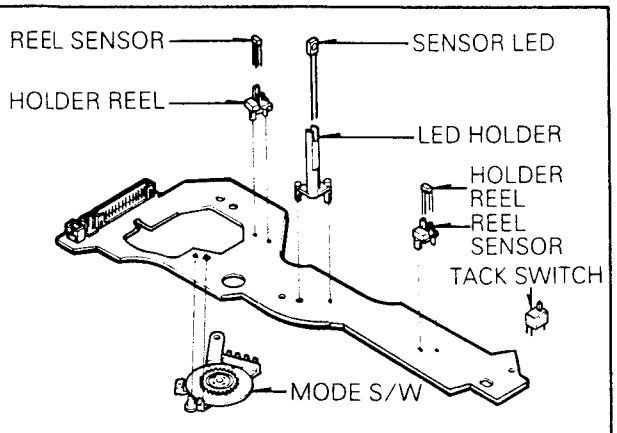


Fig. B-21-2 Mode S/W/Reel Sensor/Sensor Led

22. Capstan Motor and Brake Assembly (Fig. B-22-1)

1) Remove the Junction P.C.B Assembly
2) Hook the end of Capstan Brake Spring to the projection of Capstan Brake and then remove the Capstan Brake Assembly by lifting it up(Fig. B-22-2).
3) Remove two Screws(A), and then remove the Bracket C-Guide.
4) Remove the Connector.
5) Remove three screws(B), and then remove the Capstan Motor Assembly from the Deck Mechanism Assembly.

*** NOTE**

1) When disassembling and reassembling, hook end of the spring on the projection of Cap-Brake and remove it by lifting it up. Reassemble it in the opposite manner.

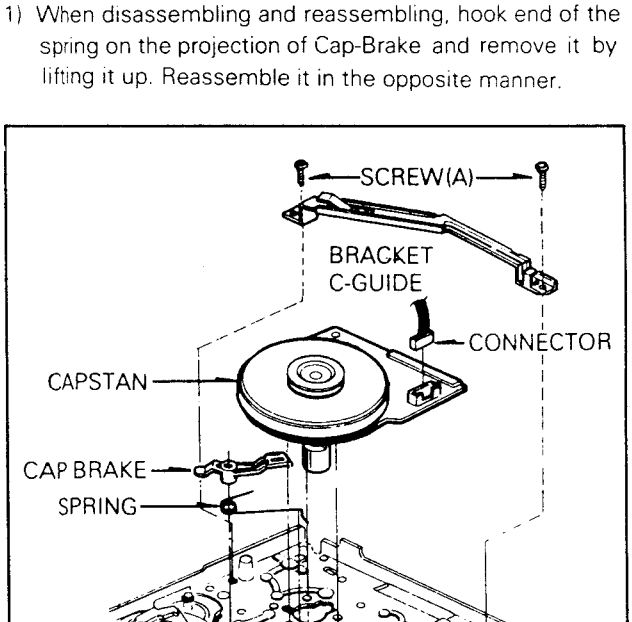


Fig. B-22-1 Capstan Motor/Brake Assembly

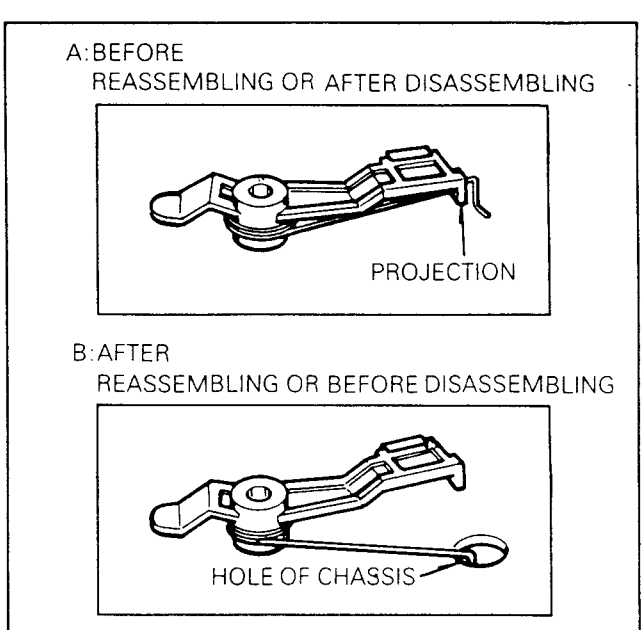


Fig. B-22-2 CAP Brake Assembly

23. Function Plate (Fig. B-23)

1) Remove two screws(B) in Eject Mode.
2) Remove the Function Plate Spring.
3) Remove the Function Plate.

*** NOTE**

1) When reassembling the groove of Lower part of Function Plate should be aligned with the shaft of Tension Lever Assembly(Fig. B-28).

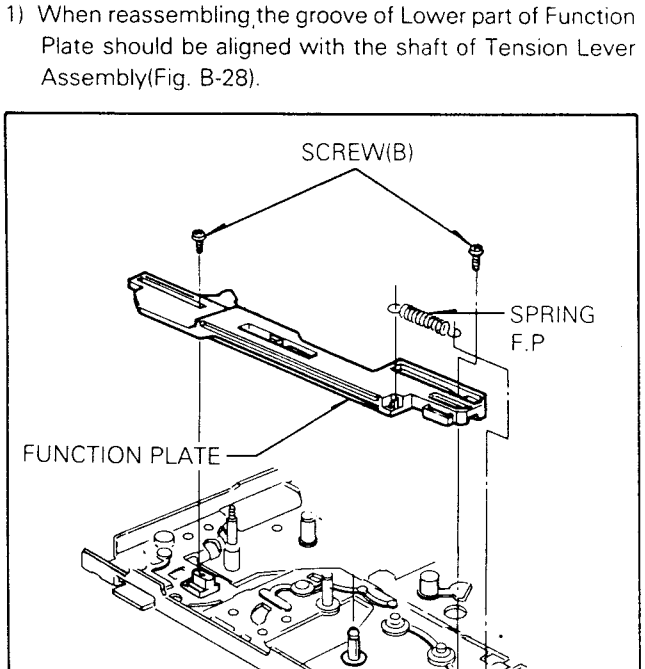


Fig. B-23 Function Plate

24. Ratchet Lever Assembly (Fig. B-24)

1) Remove the Function Plate.
2) Remove the Junction P.C.B Assembly.
3) Remove the Washer(A) and then remove the Ratchet Lever Assembly.
4) Remove the Ratchet Spring.
5) Remove the Ratchet Lever from the Ratchet 17 by lifting it up when the hook of it is aligned with the hole of Ratch et 17 while rotating it counterclockwise direction.
6) Remove the Washer(B), and turn over the Ratchet 17 and then remove the Slant Pin, Spring F, Lever.

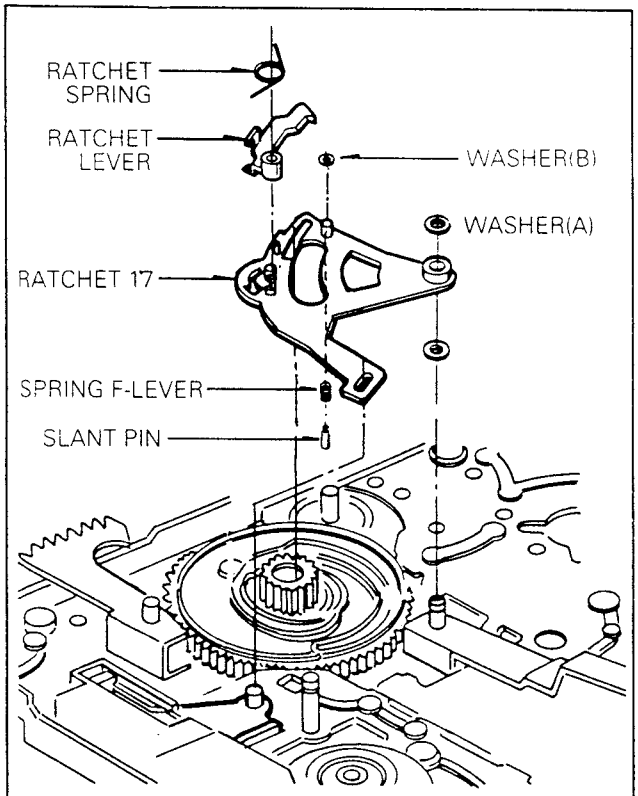


Fig. B-24 Ratchet Lever Assembly

25. Cam Gear/Rack Gear T/Rack Gear FL (Fig. B-25-2)

1) Remove the washer(A) and remove the Ratchet Lever Assembly. (Fig. B-25-1).
2) Remove the washer(B), and then remove the Cam Gear (Fig. B-25-2).
3) Remove the Rack Gear F.L.(Fig. B-25-3)
4) Remove the Rack Gear T.(Fig. B-25-3)

*** NOTE**

1) When reassembling
① Align the Projection of Rack Gear T with the hole of Loading Gear.
② Drive the Rack Gear F.L in the direction of arrow(D).
③ Hole of Cam should be aligned with the hole of chassis, and the groove(▶) of Cam Gear should be aligned with the hole of PC Gear(Fig. B-26)

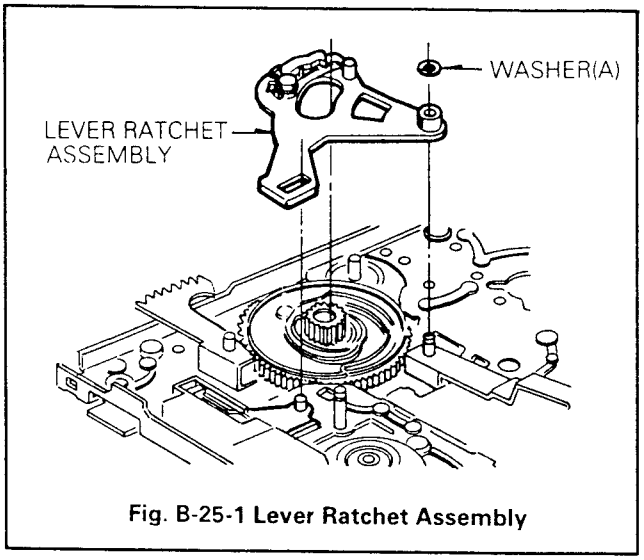


Fig. B-25-1 Lever Ratchet Assembly

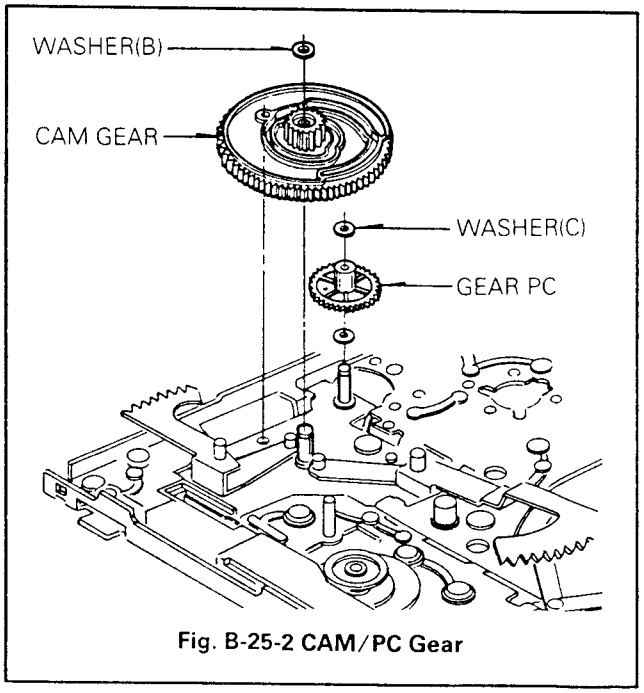


Fig. B-25-2 CAM/PC Gear

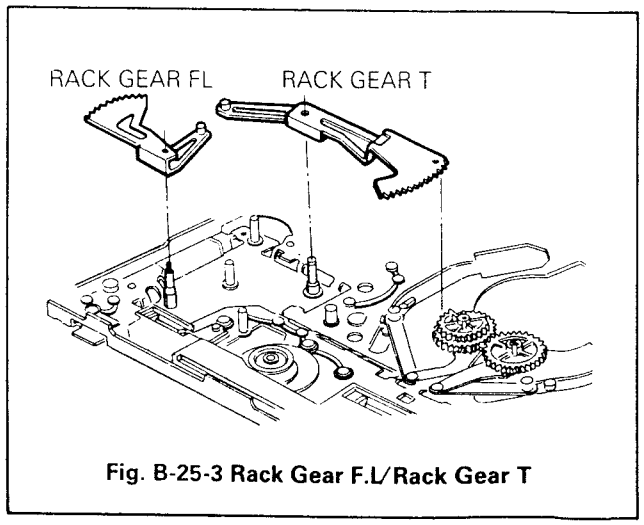


Fig. B-25-3 Rack Gear F.L/Rack Gear T

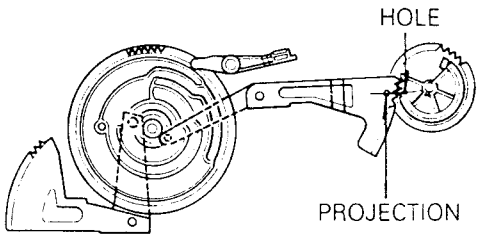


Fig. B-25-4 Rack Gear F.L/Rack Gear T/CAM Gear

26. PC Gear (Fig. B-26)

1) Remove the washer(C).
2) Remove the P.C Gear by lifting it up.

*** NOTE**

1) When reassembling

① The Groove of PC Gear should be aligned with the groove(V) of Cam Gear, and another hole of it should be aligned with the hole of chassis(Fig. B-25).

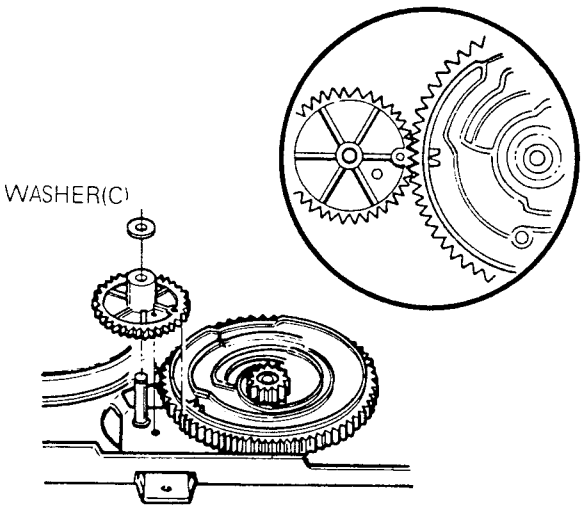


Fig. B-26 PC Gear

27. P2 and P3 Slant Assembly (Fig. B-27)

1) After finishing the disassembly of Drum Assembly, remove the P2 and P3 Slant Assembly by turning the Loading Gear(R) in the clockwise direction.(Loading direction)
2) Loosen the set screws.
3) Remove the Roller Guide from the Slant Base.

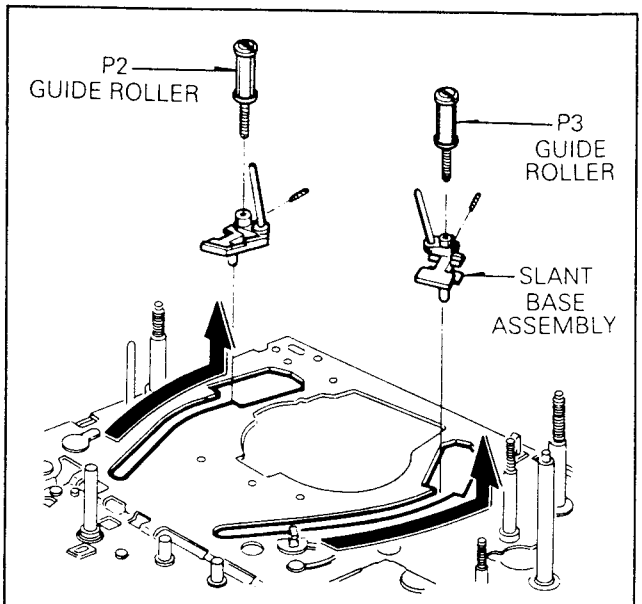


Fig. B-27 Slant Assembly

*** NOTE**

1) When disassembling and reassembling

① Use a Hexagonal wrehch to remove set screw.
② Take notice that the P2 and P3 Slant Assembly should not be changed from their original place.

28. Loading Gear Assembly (L), (R) (Fig. B-28)

1) Remove the Cam Gear, Rack-T.
2) Remove the P2 and P3 Slant Assembly by turning the Loading Gear(L),(R) in the Loading direction
3) Lift up the Loading Gear Assembly(L),(R) from the Deck Mechanism Assembly.
4) Remove the Spring Load(L),(R).
5) Separate the Loading Gear(L), (R) from Lever Load(L),(R).

*** NOTE**

1) When reassembling

① Make sure that the Loading Gear(L) and (R) should not be changed from their original place.
② Align the groove of Loading Gear(L),(O) with the groove of Gear(R),(O).

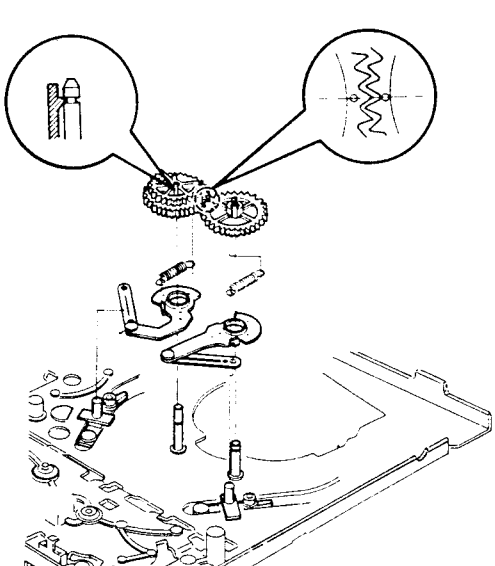


Fig. B-28 Loading Gear Assembly

29. Tension Lever Assembly (Fig. B-29)

1) Remove the Function Plate.
2) Remove the Tension Lever Assembly by pushing hooks inward.

*** NOTE**

1) When reassembling

① Set the part(A) of Tension Lever Assembly in the groove of Lower part of Function Plate.

② After reinstalling the Tension Lever Assembly, adjust the Tension Post and the Tension with a Tension Cassette.

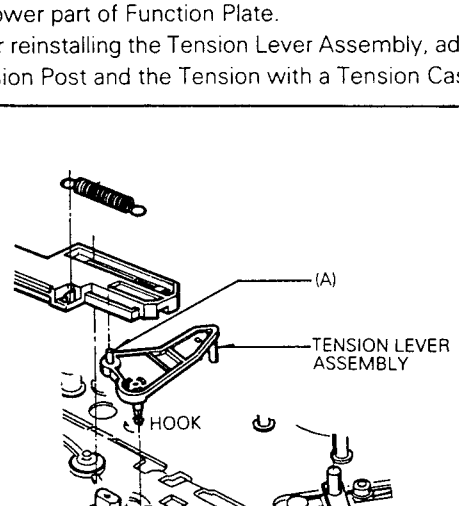


Fig. B-29 Tension Lever Assembly

30. Clutch Gear Assembly (Fig. B-30)

1) Remove the Pulley Gear.
2) Remove the Plate Function.
3) Remove the washer(A), and then remove the Clutch Gear Assembly.

*** NOTE**

1) When reassembling

① Do not disassemble the Clutch Gear Assembly any futher, because Torque adjustment is not adjustible.

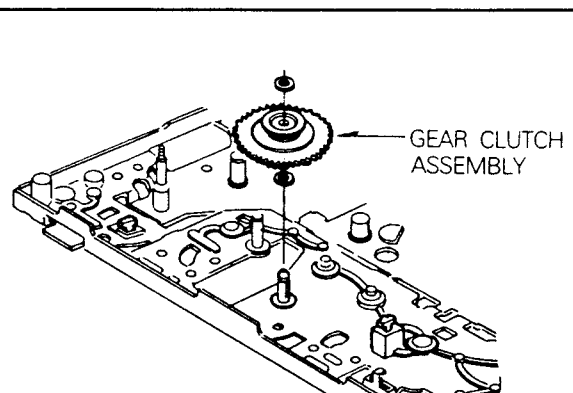
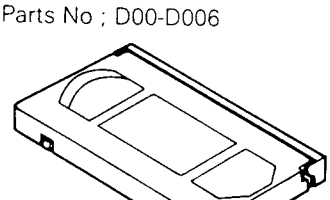
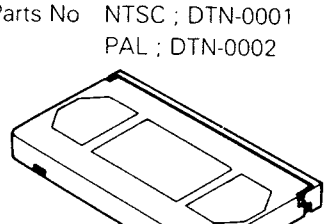
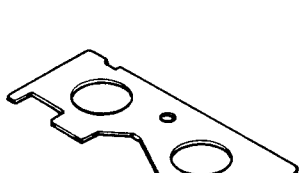
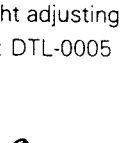
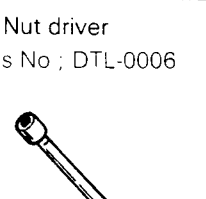


Fig. B-30 Gear Clutch Assembly

MECHANISM ADJUSTMENTS

• Tools and Fixtures for Deck

1. Back tension meter Parts No ; D00-D006 	2. NTSC alignment tape Parts No NTSC ; DTN-0001 PAL ; DTN-0002 	3. Master plane Parts No ; RJ10028 
4. Torque gauge Parts No ; D00-D002 	5. Torque gauge adaptor Parts No ; D09-R001 	6. Reel table height fixture Parts No ; RJ10027
7. Post height adjusting driver Parts No ; DTL-0005 	8. M3 Nut driver Parts No ; DTL-0006 	

1. Mechanism State Switch (Mode Switch) Check

Purpose: To detect accurately the mechanism state and prevent the mechanism from malfunction.

Test Equipment/Fixture	VCR State	Check Point
● Blank tape	● Eject Mode (with cassette ejected)	● Mechanism state switch (Mode Switch and Cam)

Check Procedure

1) Turn the VCR on and eject the tape by pressing eject button.
2) Remove the Cabinet Top, the Main P.C.Board and the CST Housing. Then push the CST IN/OUT switch (Loca. #137) and eject button at the same time.
3) Turn the worm (Loca. #082) of Loading Motor Assembly (Loca. #A10) to the left side (counter-clockwise) to align the three holes (A) of the Pinch Gear, the P.C.Gear and the Chassis.
4) Remove the Bottom Cover and then check that the groove (V) and the hole (O) of Mode S/W are aligned each other. If the above alignment is not obtained, adjust as follows.
   (1) Remove the Bracket Assembly Bottom and the Capstan Belt in the state of power off.
   (2) Remove the P.C.B Assembly, align the groove (V) and the hole (O) of Mode S/W each other and then reassemble the P.C.B Assembly.
   (3) Turn the power on and perform the various operations to check that the loading and the unloading are correct.

Check Diagram

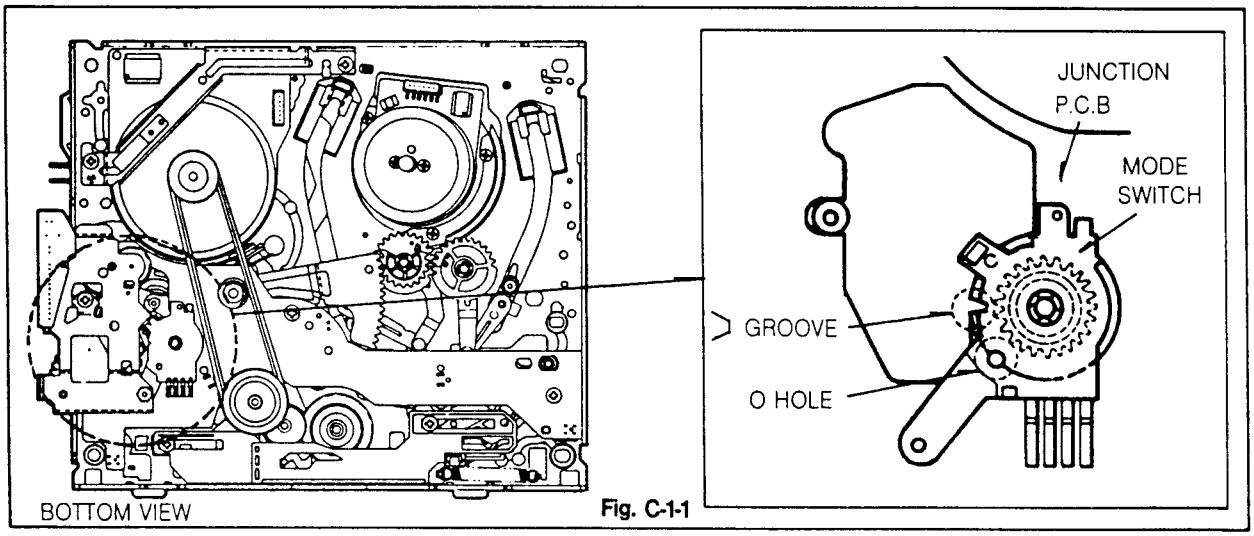


Fig. C-1-1

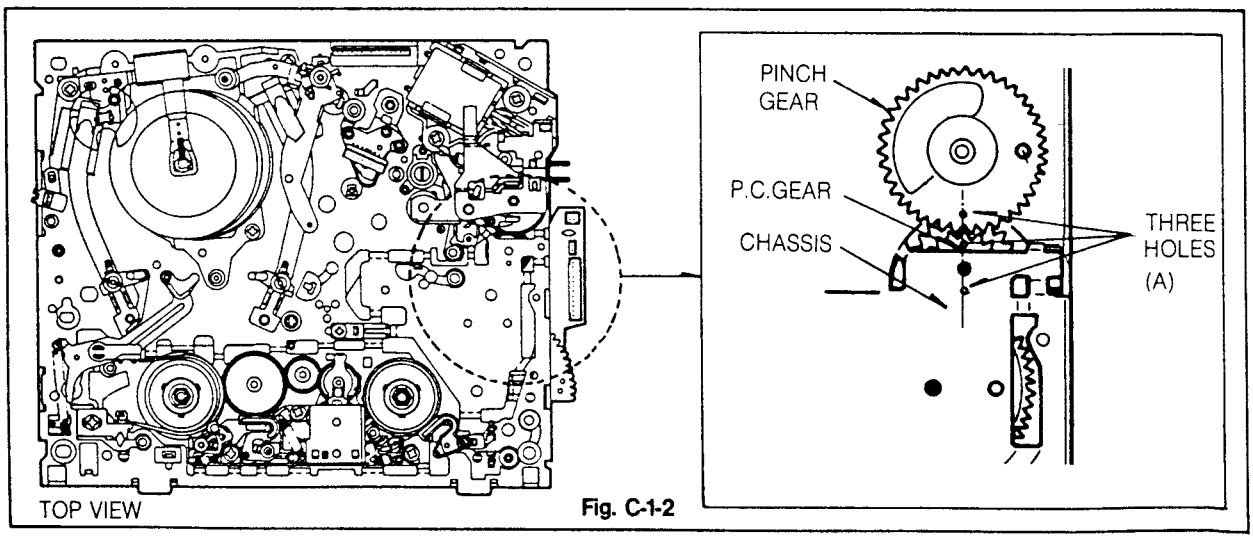


Fig. C-1-2

2. Preparation for Adjustment(To set VCR to the Loading State without Inserting a Cassette)

1) Unplug the power cord from the AC outlet.
2) Remove the Cabinet Top and Front Loading mechanism.
3) Plug the power cord into the AC outlet.
4) Turn the VCR on and push the tact switch in the PCB Assembly.
   The VCR can accept input of each mode in this case. However the rewind and review operation cannot be performed for more than a few seconds because the take-up reel table is in the stop state and reel pulses cannot be detected.

(NOTE)
Always return the VCR to the Front Loading Mechanism Assembling State in the following order after the above operations have been performed.

1) Press the Eject button after turning the power on.
2) Wait for about 10 seconds until searching out the assembly position.
3) Assemble the Front Loading Mechanism and connect the Front Loading Mechanism Connector.
4) Refer to the "Front Loading Mechanism Disassembly" which is described previously.

3. Reel Table Height Adjustment

Purpose: To set the reels of the cassette to the specified height, thus determine the height of tape.

Test Equipment/Fixture	Preparation for adjustment	VCR State	Adjustment Points
● Master Plane ● Reel Table Height Fixture	1) Remove the Front Loading Mechanism 2) Mount the Master Plane and place the Reel Table Height Fixture on it.		● Washer under the Supply and Take-Up Reel Tables.

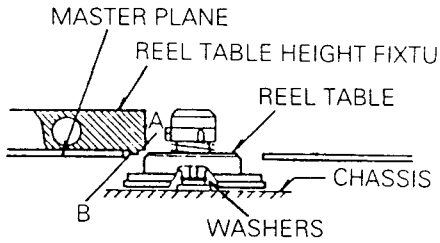
Adjustment procedure

1) Check that the Reel Table is between sections A and B of the Reel Table Height Fixture.
2) If the table is not between sections A and B of the Fixture, replace the washers(two types, 0.3mm and 0.5mm thick) in the Reel Table or adjust them.

****CAUTION****

When the Tension Arm and Tension Band are removed, adjust the tension post position and tension after reinstalling them.

Adjustment Diagram



SUPPLY AND TAKE-UP REEL TABLE

Fig. C-3

4. Tension Post Position and Tension Adjustment

Purpose: To make the tension of tape constant so that the contact between the video heads and tape is stabilized.

Test Equipment/Fixture	VCR State	Adjustment Point
● Tension Meter (Tension adjustment)	● Play without cassette and with a Tension Meter	● Holder Band(A)

Adjustment Procedures

〈Position Adjustment〉

1) Perform loading without inserting a tape and loosen the screw that attaches the Band Holder(B) to the D-Deck Mechanism Assembly.
2) Insert the (−)type driver between the Band Holder(B) and the "V" groove of the chassis.
3) Move the Band Holder(B) right and left and align the center of tension post with the center of P1.
4) Tighten the screw that attachs the Band Holder(B) to Deck Mechanism Assembly.

〈Tension Adjustment〉

1) Play the Tension Meter and read the Tension Meter:35g·cm±2.5g·cm(reference value).
2) If the result is abnormal.
   (1) over the standard:loosen the screw, move the Band Holder(B) right a little and then tighten the screw and make sure that this adjustment is correct.
   (2) below the standard:loosen the screw, move the Band Holder(B) left a little and then tighten the screw and make sure that this adjustment is correct.

****CAUTION****

The range of movement of Band Holder(B) should be within ±1.5mm while being adjusted.
If the range is over, you should recheck the Reel Brake, Tension Arm and Spring.

Adjustment Diagram

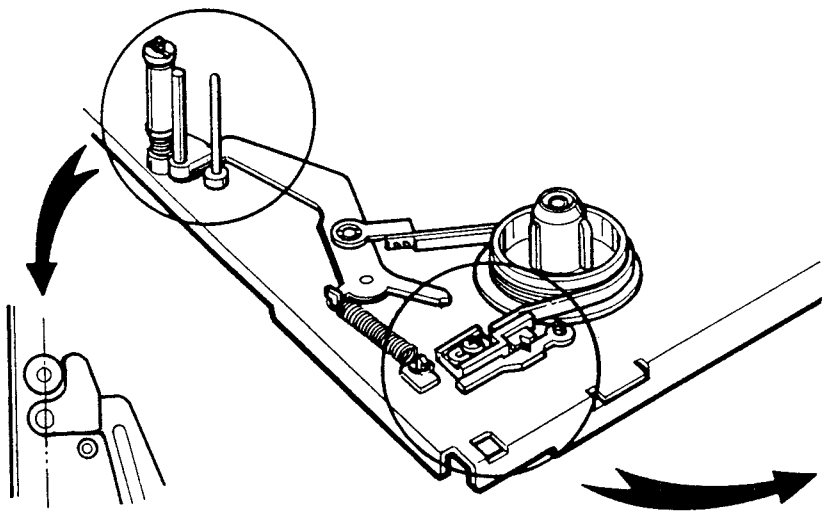


Fig. C-4-1

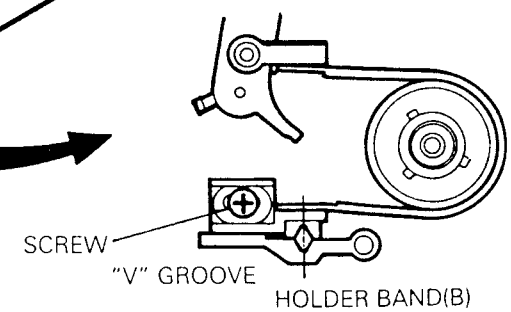


Fig. C-4-2

5. Checking Torque

Purpose: It is necessary to check the tension, torque and compression force at the tape take-up section and moving section to make the tape run smoothly and satisfy the basic performance of the VCR. Check these if the tape does not run smoothly or the tape speed is abnormal.

Test Equipment/Fixture	VCR state
● Torque Gauge ● Torque Gauge Adaptor	● Set the VCR to each operation mode without inserting a cassette. (See '2 Preparation for Adjustment')

Item	VCR Operation mode	Measurement Reel	Measurement Values
Main brake torque.	Eject	Supply and take-up reels	600g.cm or more
Slack removal torque	Unloading(power off)	Supply reel	110~200g·cm
Fast forward torque	Fast forward	Take-up reel	400g·cm or more
Rewind torque	Rewind	Supply reel	400g·cm or more
Play take-up torque	Play	Take-Up reel	90~130g·cm

Checking Method

The values are measured by using a torque gauge and torque gauge adaptor with the torque gauge fixed.

Note: This value is measured when the VCR is shifted in the unloading direction from the fast forward or rewind mode and quick braking is applied to both Reel Tables.

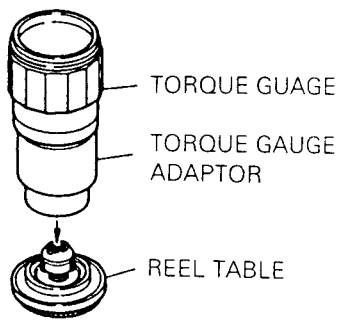


Fig. C-5

6. Guide Post Height Adjustment

Purpose: To control tape height

Test Equipment/Fixture	VCR State	Adjustment Point
● Master Plane ● Blank Tape ● Reel Table Height Jig ● Post Height Adjusting Driver ● M3 Nut Driver	● Mount the Master Plane and place the Reel Table Height Jig on it.	● Nuts on Impedance Roller ● Guide Post

1) Set the clearance between the bottom of the P1 Roller Flange and under cut of Reel Table Height Fixture to 0~0.1mm(Fig. C-6-1).
2) Set the clearance between the bottom of the Guide Post upper flange and top of the Reel Table Height Jig to 0~0.2mm(Fig. C-6-2).
3) Load and run the Tape and check that the tape does not ride over the upper and lower flanges of the guide post.
4) If the tape rides over either flange, adjust the height of P1 Roller and Guide Post as follows(Fig. C-6-3).
   - If the tape rides over the upper flange, turn the nut counterclockwise.
   - If the tape rides over the lower flange, turn the nut clockwise.

Adjustment Diagrams

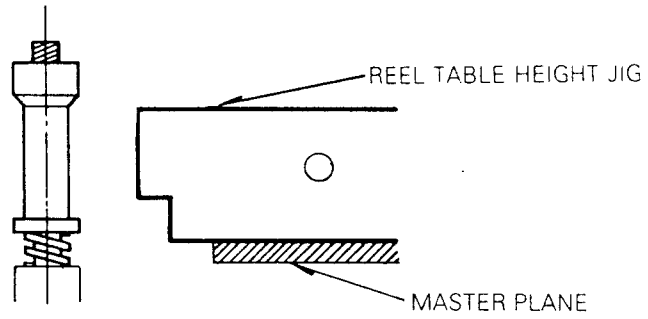


Fig. C-6-1

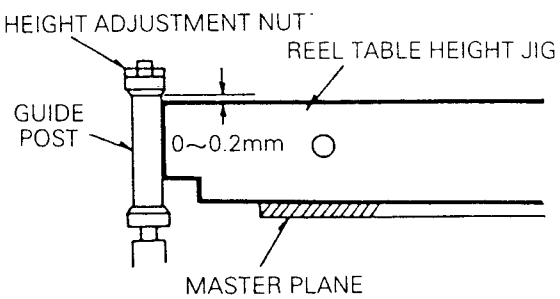


Fig. C-6-2

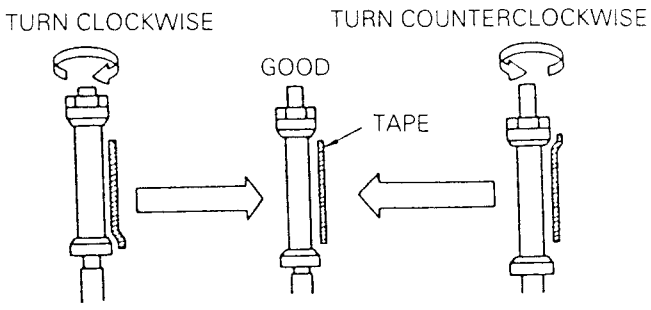


Fig. C-6-3

7. Guide Roller Height Adjustment

Purpose: To regulate the height of tape so that the bottom of tape runs along the tape guide line on the lower drum.

A. Coarse Adjustment

Test Equipment/Fixture	VCR State	Adjustment Point
● Master Plane ● Reel Table Height Fixture ● Hexagonal Wrench ● Post Height Adjusting Driver	● Mount the Master Plane and place the Reel Table Height Fixture on it.	● Roller Guide Height Adjustment Screws on the Supply and Take-Up Guide Rollers.

Adjustment Procedure

1) Align the bottom of the Guide Roller's upper flange and the top of the Reel Table Height Fixture.
2) Perform the precise adjustment next.
3) When the Guide Roller is damaged, release the Guide Roller retaining screw and then replace the Guide Roller.

Adjustment Diagram

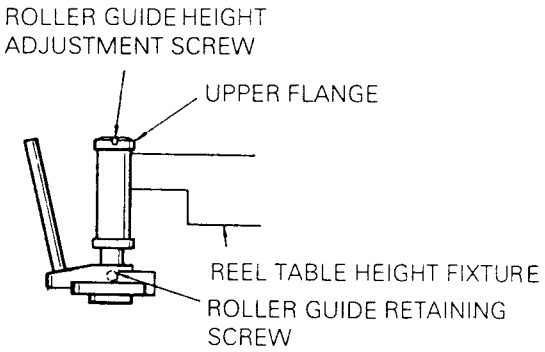


Fig. C-7-1

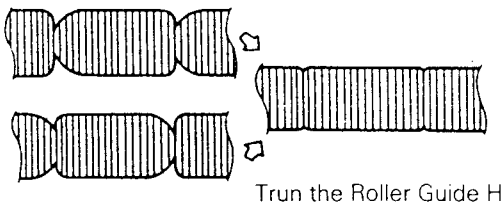
B. Precise Adjustment

Test Equipment/Fixture	Test Equipment Connection Points	VCR State	Adjustment Point
● Oscilloscope ● Post Height Adjusting Driver ● Alignment Tape ● Hexagonal wrench	● CH-1:PB RF Envelope ● CH-2:SW 3–Hz ● Head Switching Output Point ● RF Envelope Output Point	● Play an alignment tape	● Guide Roller Height Adjustment Screws.

Adjustment Procedure

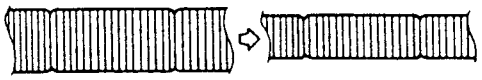
1) Play an alignment tape after connecting the probe of the oscilloscope to RF Envelope Output Test Point and Head Switching Output Test Point.
2) Tracking control(in PB mode):Center position(When this adjustment is performed after the drum assembly has been replaced, set the tracking control so that the RF output is maximum.)
3) Height adjustment screw:Flatten the RF waveform.
4) Turn(Move) the tracking control(playback) clockwise and counterclockwise.(to the right and left)
5) Check that the drops of RF output are uniform at the start and end.

Waveform Diagrams



Trun the Roller Guide Height Adjustment Screw slightly to flatten the waveform.

Fig. C-7-2

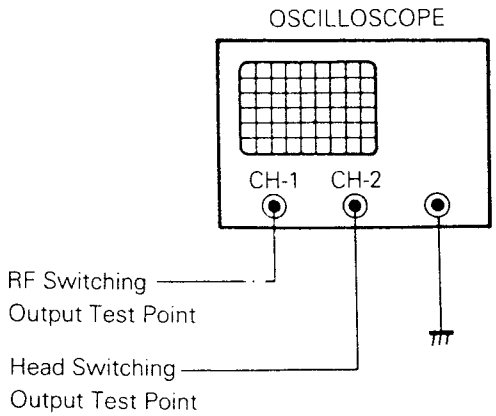


Tracking control at center

Turn(Move) the tracking control to both directions.

Fig. C-7-3

Connection Diagram



8. Audio/Control(A/C) Head Adjustment

Purpose: To keep the contact between the tape and head so that the specificed track is recorded and played back.

A. Coarse Adjustment

Test Equipment/Fixture	VCR State	Adjustment Points
● Master Plane ● Reel Table Height Fixture ● M3 Nut Driver	● Mount the Mater Plane and place the Reel Table Height Fixture on it.	● Special screw ● Cone Point Screw for tilt ● Azimuth Adjustment Screw ● A/C Head Adjuster
● Blank tape	● Run the blank tape	

Adjustment procedure/Adjustment Diagram

1) Tighten the spring section of the special screw so that it protrudes 6.4mm(approx.) over the top of Head Base(1).

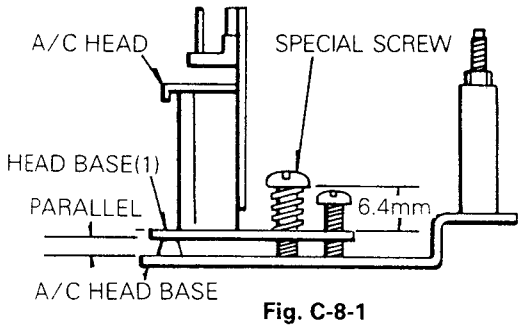


Fig. C-8-1

2) Turn the Azimuth Adjustment Screw and Cone Point Screw so that the Head Base(1) and A/C Head Base are parallel.

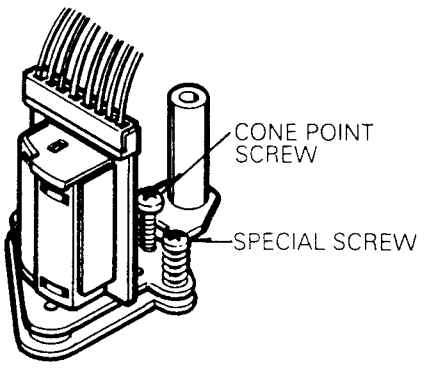


Fig. C-8-2

3) Turn the A/C Head Adjuster until the clearance between the Master Plane and Head Base(1) is approx 1.2mm.

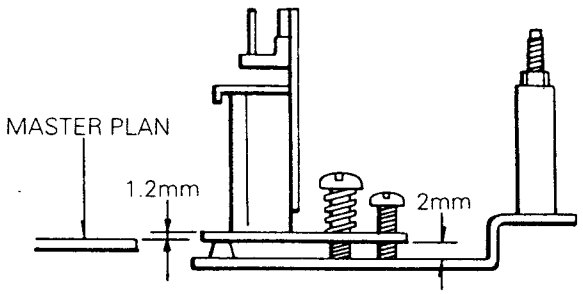


Fig. C-8-3

4) Remove the adjustment fixture, load a blank tape and set the VCR to the play mode.

5) Check that there is no conspicuous curling and riding over around the A/C head. If there is conspicuous curling or riding over, readjust the Cone Point Screw, Azimuth Adjustment Screw and A/C Head Adjuster. When the bottom edge of tape is 0.20~0.25mm from the bottom edge of the control head's core, the height of A/C head is ideal.

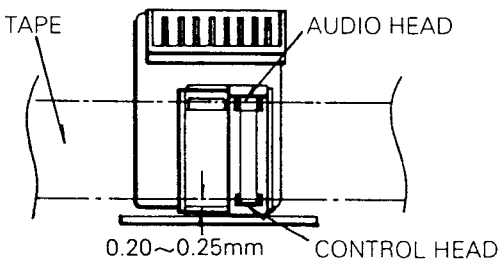


Fig. C-8-4

6) Perform the precise adjustment continuously.

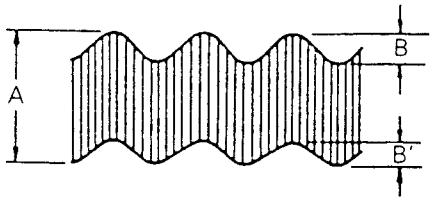
B. Precise Adjustment

Test Equipment/Fixture	Test Equipment Connection Point	VCR State	Adjustment Points
● Oscilloscope ● Alignment tapes ● M3 Nut Driver	● Audio output jack	● Play an alignment tape 1KHz, 6KHz sections	● Azimuth Adjustment Screw ● A/C Head adjuster ● Cone point screw

Adjustment Procedure

1) Connect the probe of oscilloscope to audio output jack.
2) Adjust the Azimuth Adjustment Screw, A/C Head adjuster and cone point screw slightly and alternately so that a Audio 1KHz output is maximum and flat.(minimum fluction)
3) Adjust the Azimuth Adjustment Screw slightly and alternately so that the Audio 6KHz output is maximum.

Waveform Diagram



A:Maximum BB':Minimum

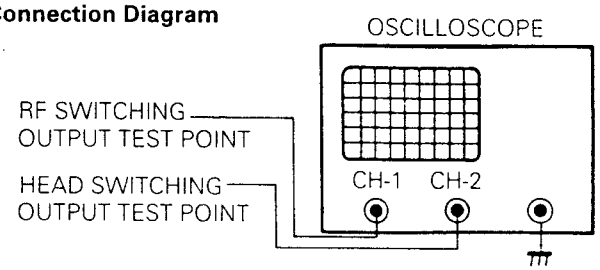
Fig. C-8-5

9. X-Value Adjustment

Purpose: To obtain compatibility with other VCRs.

Test Equipment/Jigs	Test Equipment Connection Points	VCR State	Adjustment Points
● Oscilloscope ● Alignment tapes ● Post Height Adjusting Driver	● CH-1:PB RF Envelope ● CH-2:SW 30Hz ● Head Switching Output Test Point ● RF Envelope Output Test Point	● Play an alignment tape	● X Adjust

Connection Diagram



1) Insert a cassette tape, and then "AUTO TRACKING" will be displayed on the Digitron, then push the Tracking ⊕ or ⊖ Keys one time as soon as possible to make the VCR release the Auto Tracking.
2) Turn the Adjust X to the maximum RF Envelope level when the VCR is free from the Auto tracking.
3) If RF envelope output is maximized from the center click position in right direction(clockwise), set the tracking control to the center and turn the X Adjust counterclockwise.
4) If in left direction(counterclockwise), turn it clockwise by same method.
5) In case of the 30 μm, head will trace over a 60 μm width track, readjust it so that RF Envelope output begins falling at the same angle when tracking control is turned either left or right.

Adjustment Procedure

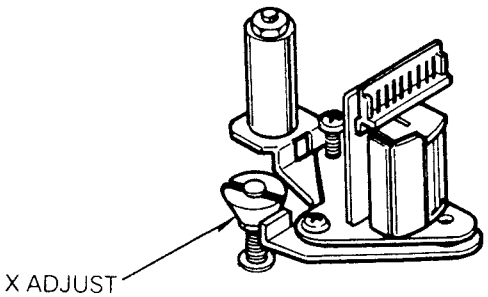


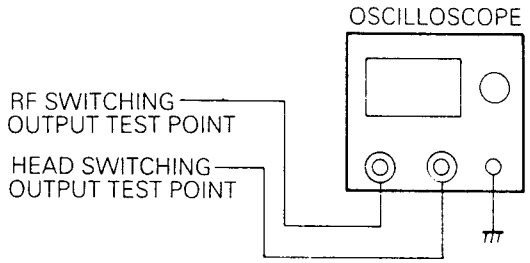
Fig. C-9

10. Adjustment after Replacing Drum Assembly(Video Heads)

Purpose: To suppress drift in the height relative to the Guide Roller and drift of the X Value after replacing the drum.

Test Equipment/Fixture	Test Equipment Connection Points	VCR State	Adjustment Points
● Oscilloscope ● Post Height Adjusting Driver ● Alignment tape ● Blank tape ● M3 Nut Driver	Checking the flatness ● CH-1:PB RF Envelope ● CH-2:SW 30Hz ● Head Switching Output Point ● RF Envelope Output Point	● Run the blank tape ● Play an alignment tape	● Guide Rollers Precise Adjustment ● Switching point ● Tracking point ● X-Value

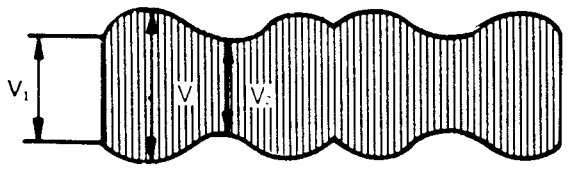
Connection Diagram



Checking/Adjustment Procedure

1) Run the blank tape, check and adjust whether the Roller Guide is curling or creasing tape around the Roller Guide.
2) Check the RF envelope output flatness and adjust the Roller Guide Height while playing an alignment tape.
3) Adjust the head switching point.
4) Check that RF envelope output is maximum when the tracking is at the center click position.
5) Adjust the Tracking Preset and X-Value Adjust with X Adjust.

Waveform Diagram



V_1/V MAX $\geqslant$ 0.7
V_2/V MAX $\geqslant$ 0.8
RF ENVELOPE OUTPUT

Fig. C-10

11. Maintenance/Inspection Procedure

(1) Required Maintenance

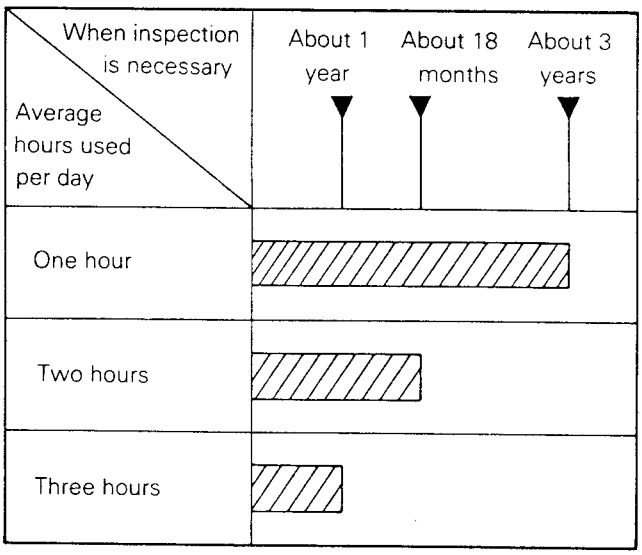
The recording density of a VCR is much higher than that of an audio tape recorder. VCR components must be very precise, at tolerances of 1/1000mm, to ensure compatiblity with other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure good picture, periodic inspection and maintenance, including replacement of worn out parts and lubrication, are necessary.

(2) Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR, and the environment in which the VCR is used.

But, in general home use, a good picture will be maintained if the inspection and maintenance is made every 1,000hours. The table below shows the relation between time used and inspection period.

Table 1



(3) Check before starting repairs

The following faults can be remedied by cleaning and oiling. Check the needed lubrication and the conditions of cleanliness in the unit.

Check with the customer to find out how often the unit is used, and then determine that the unit is ready for in spection and maintenance. Check the following parts.

Table 2

Phenomenon	Inspection
Poor S/N, no color	Dirt on video head or worn video head
Tape does not run or tape is slack	Dirt on pressure roller, belt or flywheel belt
Vertical jitter, horizontal jitter	Dirt on video head or in tape transport system
Color beats	Dirt on full-erase head
Low volume or sound distorted	Dirt on audio/control head
Fast forward or rewind is not done or rotation is slow	Dirt on belt

(4) Supplies Required for Inspection and Maintenance

(1) Greases Kanto G-31(or equivalent)
(2) Alcohol(or freon)
(3) Cleaning Patches

5) Maintenance Procedure

5-1) Cleaning

(1) Cleaning video head

First use a cleaning tape. If dirt on head is too stubborn to remove by tape, use the cleaning patch. Coat the cleaning patch with alcohol or freon to the point indicated. Touch the cleaning patch to the head tip and gently turn the head(rotating cylinder) right and left.

(Do not move the cleaning patch vertically and make sure that only the buckskin on the cleaning patch comes into contact with the head. Otherwise, the head may be damaged.)

Thoroughly dry the head . Then run test tape. If alcohol or freon remains on the video head, the tape may be damaged when it comes into contact with the head surface.

(2) Clean the tape transport system and drive system, etc, by wiping with a cleaning patch wetted with alcohol of freon.

Note:

① It is the tape transport system which comes into contact with the running tape. The drive system consists of those parts which move the tape.

② Make sure that during cleaning you do not touch the tape transport system with the tip of a screw driver and no force is applied to the system that would cause deforming.

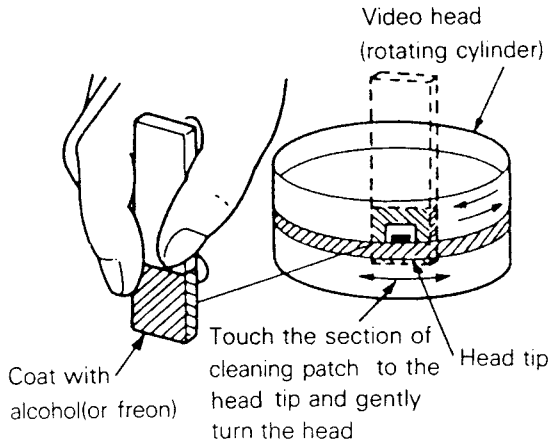


Fig. C-11-1

5-2) Greasing

(1) Greasing guidelines

Apply grease, with a cleaning patch. Do not use excess grease. It may come into contact with the tape transport of drive system. Wipe any excess and clean with cleaning patch wetted in alcohol or freon.

(2) Periodic greasing

Grease specified locations every 5,000hours.

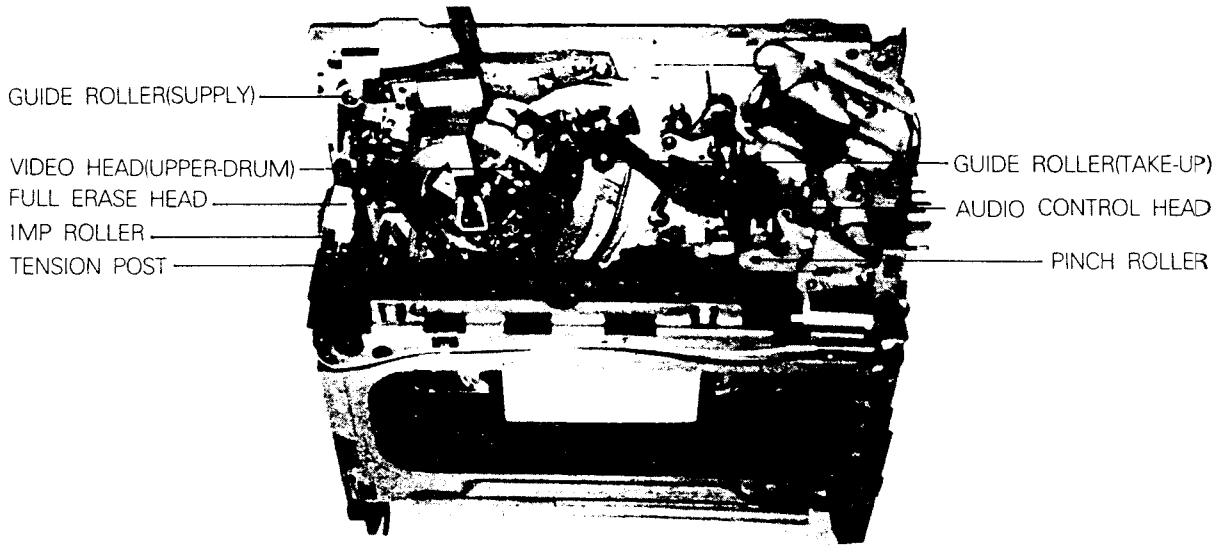


Fig. C-11-2 Tape Transport System

Phenomenon	Inspection	Replacement	
Color beats	Dirt on full-erase head	○	→ 1
Poor S/N no color	Dirt on video head	○	→ 2
Vertical jitter	Dirt on video head Dirt in tape transport system	○	→ 3
Low volume, Sound distorted	Dirt on audio/control head	○	→ 4
Tape does not run. Tape is slack	Dirt on pinch roller	○	→ 5

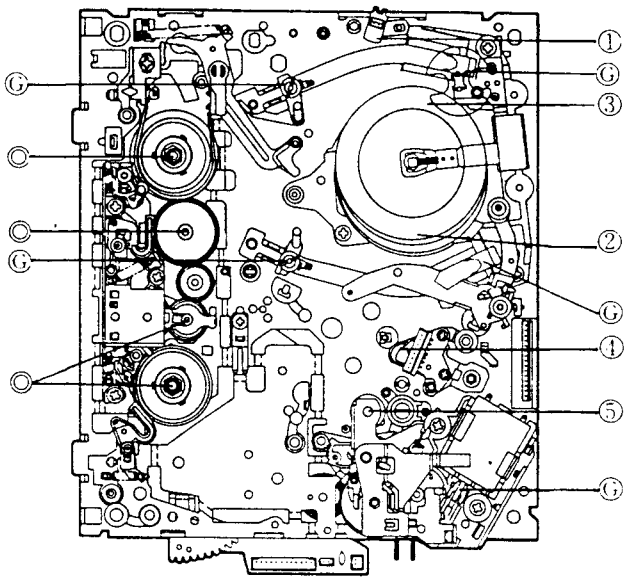


Fig. A-12 Top View of Mechanism

Phenomenon	Inspection Location	Replacement	
Do not fast forward or rewind, or rotation is slow Tape does not run Slack tape	Dirt on reel belt	○	→ 6

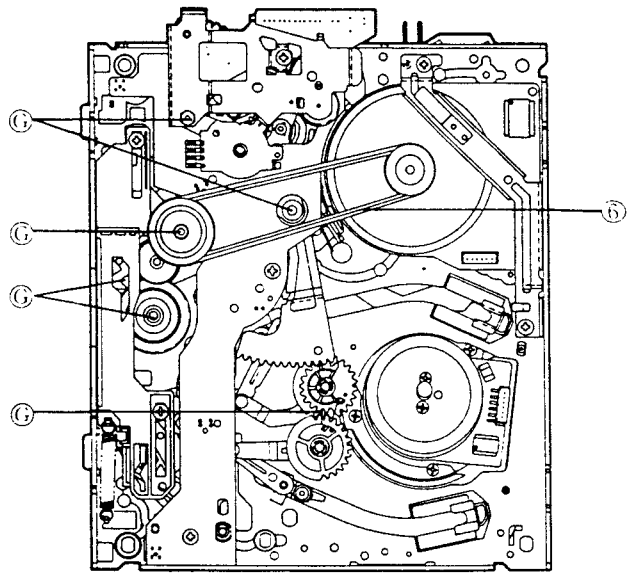


Fig. A-13 Bottom View of Mechanism

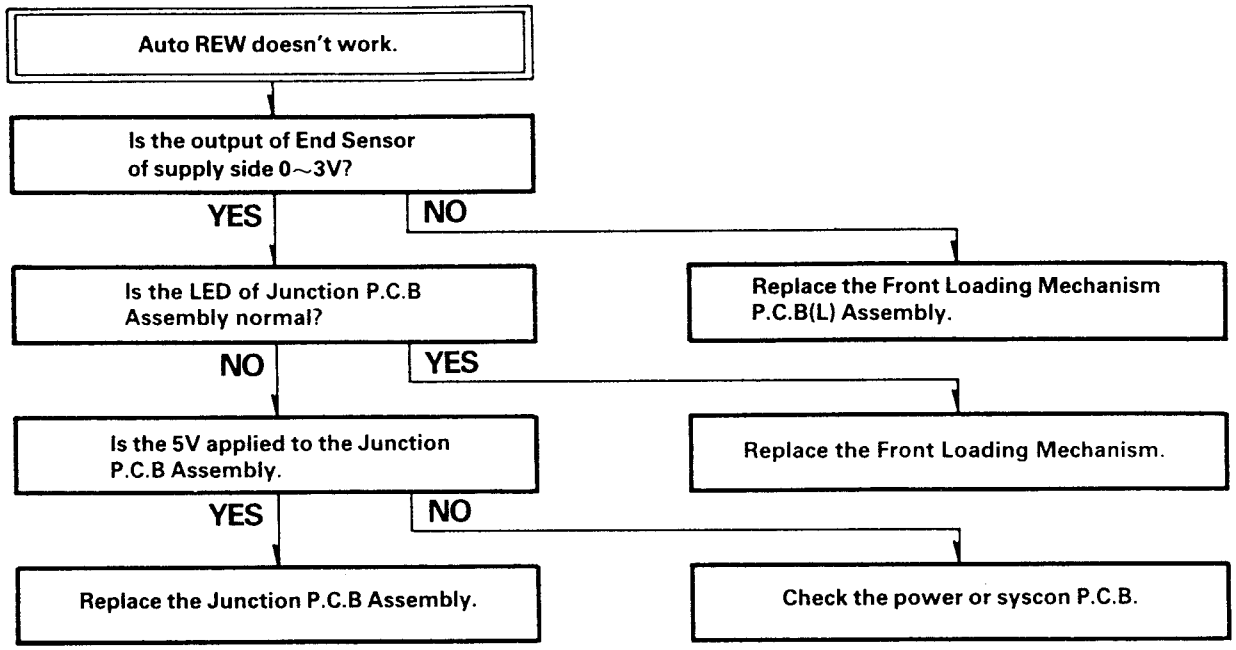
Ⓖ:Grease

Note: If locations marked with ○ do not operate normally after cleaning, check for wear and replace.
See the EXPLODED VIEWS at the end of this manual as well as the above illustrations for the sections to be lubricated and greased.

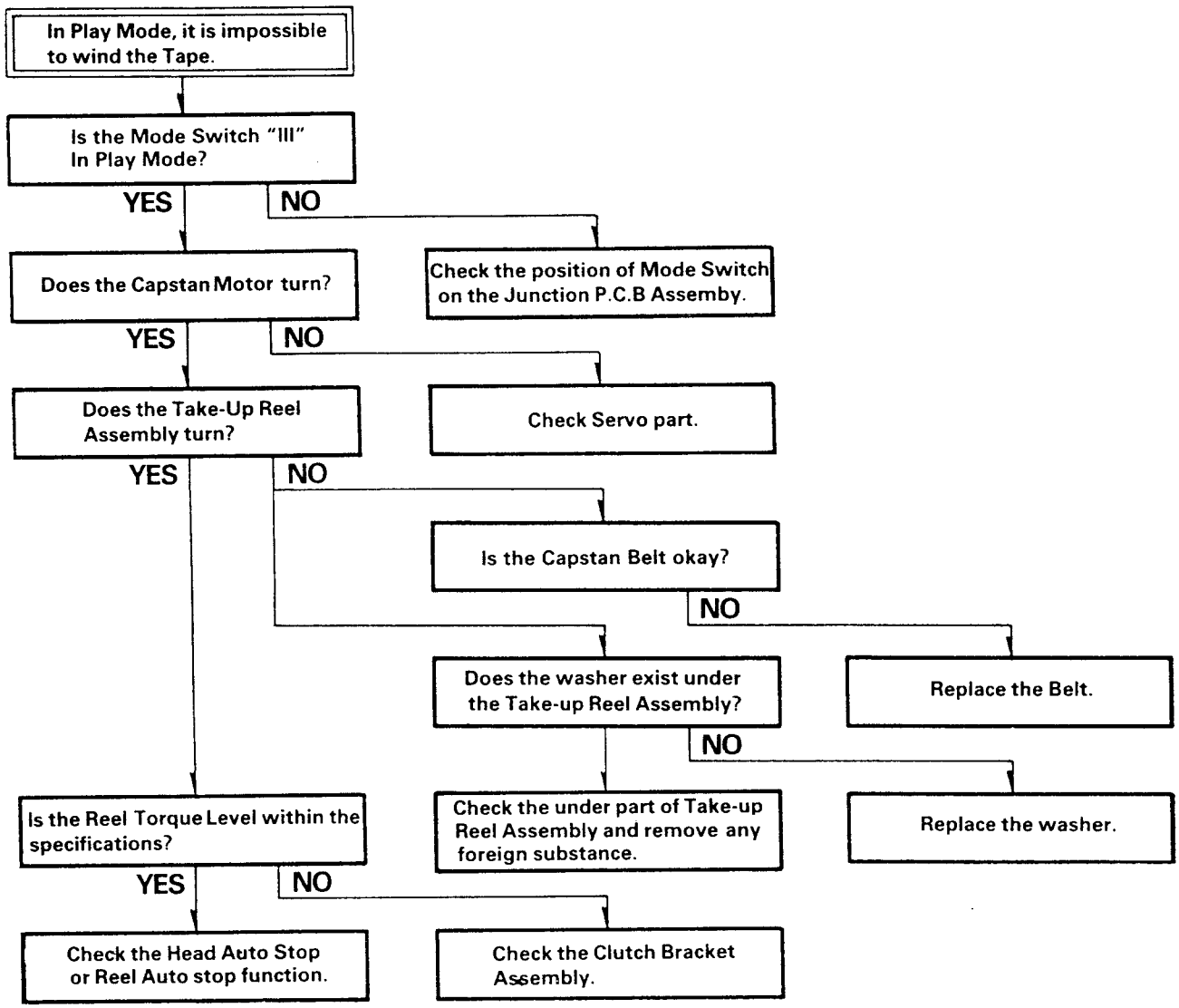
MECHANISM TROUBLESHOOTING GUIDE

1. Deck Mechanism

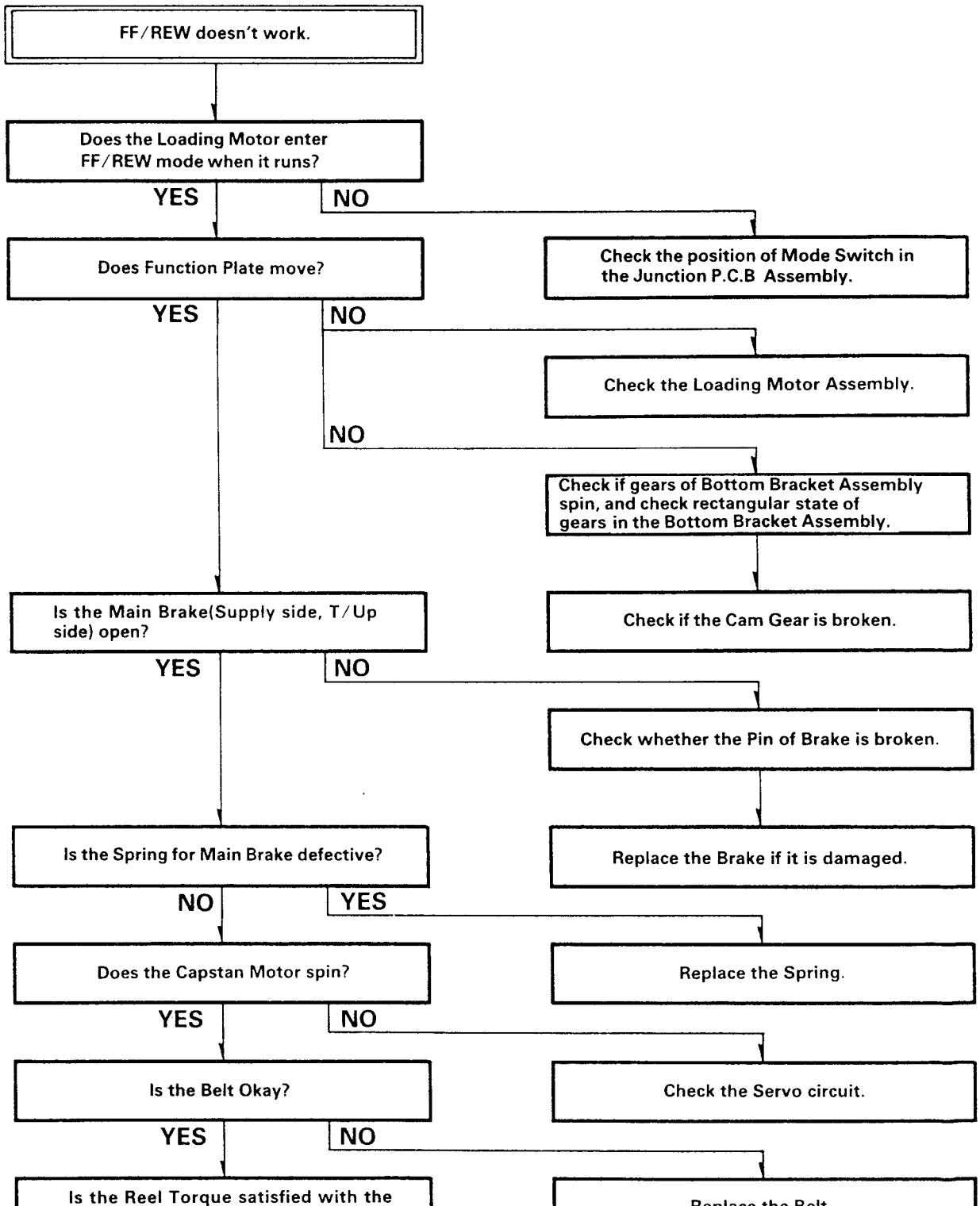
A.


Auto REW doesn't work.
Is the output of End Sensor of supply side 0~3V?
YES
NO
Is the LED of Junction P.C.B Assembly normal?
Replace the Front Loading Mechanism P.C.B(L) Assembly.
NO
YES
Is the 5V applied to the Junction P.C.B Assembly.
Replace the Front Loading Mechanism.
YES
NO
Replace the Junction P.C.B Assembly.
Check the power or syscon P.C.B.

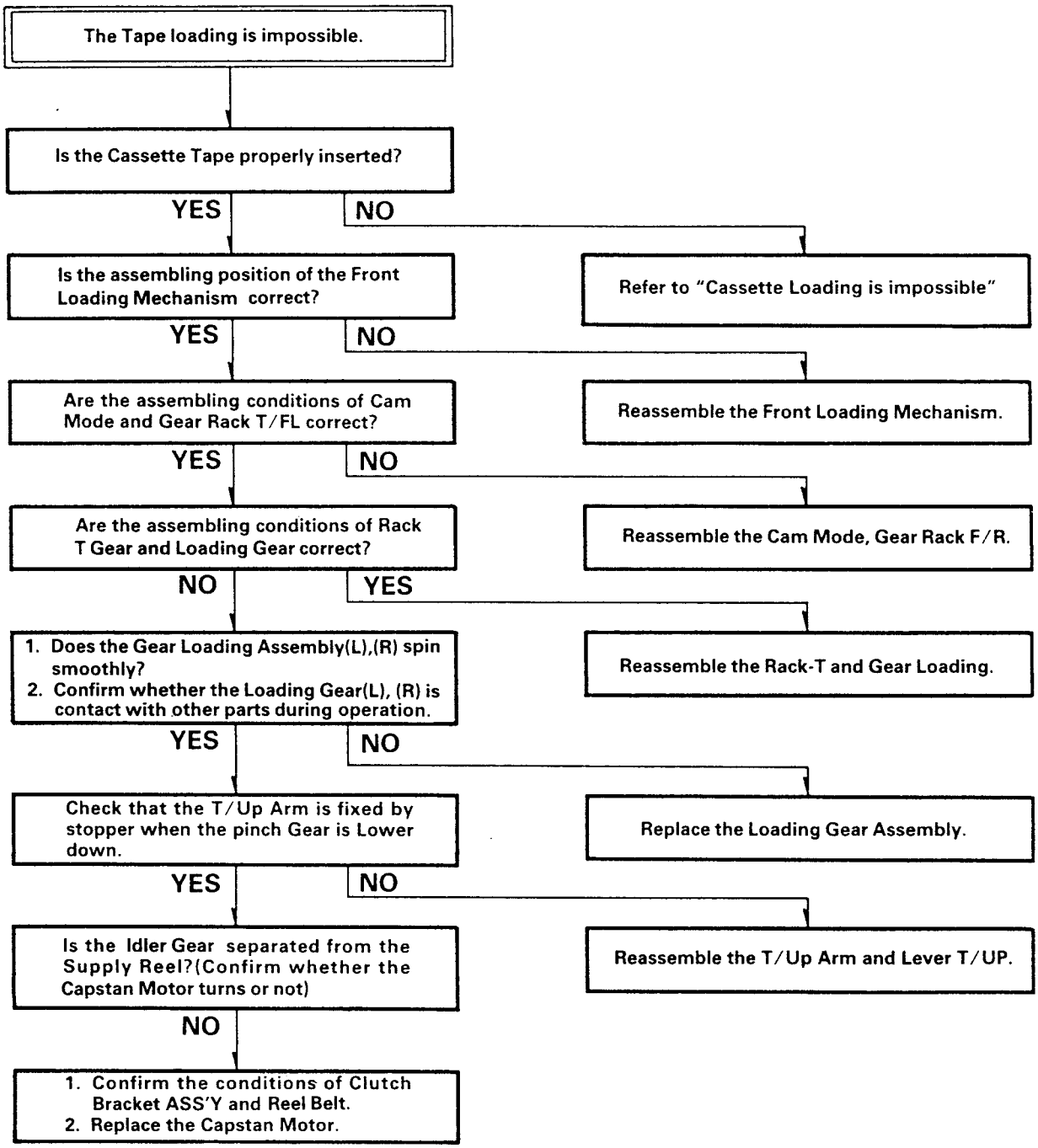
B.


In Play Mode, it is impossible to wind the Tape.
Is the Mode Switch "III" In Play Mode?
YES
NO
Check the position of Mode Switch on the Junction P.C.B Assemby.
Does the Capstan Motor turn?
YES
NO
Check Servo part.
Does the Take-Up Reel Assembly turn?
YES
NO
Is the Capstan Belt okay?
NO
Replace the Belt.
Does the washer exist under the Take-up Reel Assembly?
NO
Replace the washer.
Check the under part of Take-up Reel Assembly and remove any foreign substance.
Is the Reel Torque Level within the specifications?
YES
NO
Check the Head Auto Stop or Reel Auto stop function.
Check the Clutch Bracket Assembly.

C.

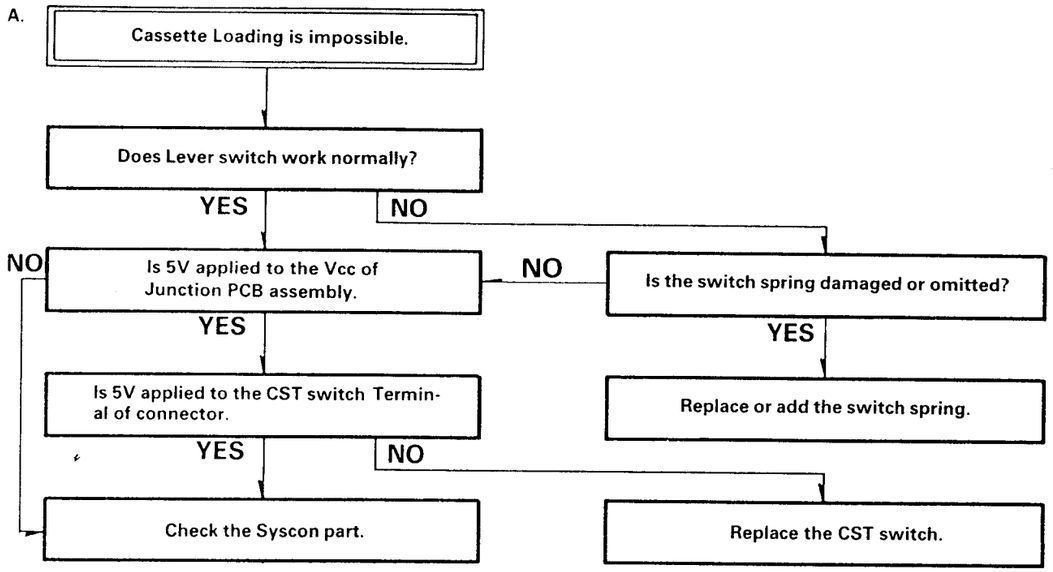

FF/REW doesn't work.
Does the Loading Motor enter FF/REW mode when it runs?
YES
NO
Check the position of Mode Switch in the Junction P.C.B Assembly.
Does Function Plate move?
YES
NO
Check the Loading Motor Assembly.
NO
Check if gears of Bottom Bracket Assembly spin, and check rectangular state of gears in the Bottom Bracket Assembly.
Is the Main Brake(Supply side, T/Up side) open?
YES
NO
Check if the Cam Gear is broken.
Check whether the Pin of Brake is broken.
Is the Spring for Main Brake defective?
NO
YES
Replace the Brake if it is damaged.
Does the Capstan Motor spin?
YES
NO
Replace the Spring.
Is the Belt Okay?
YES
NO
Check the Servo circuit.
Is the Reel Torque satisfied with the specifications of FF/REW mode?
NO
Replace the Belt.
Replace the Bracket F.R Assembly.

D.

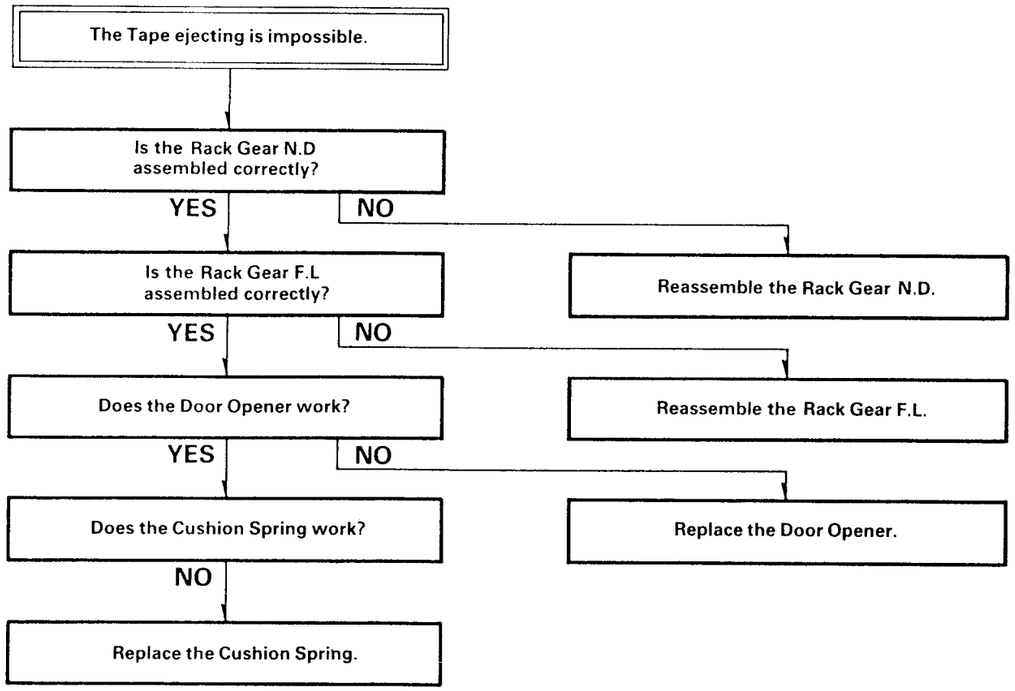

The Tape loading is impossible.
Is the Cassette Tape properly inserted?
YES
NO
Refer to "Cassette Loading is impossible"
Is the assembling position of the Front Loading Mechanism correct?
YES
NO
Reassemble the Front Loading Mechanism.
Are the assembling conditions of Cam Mode and Gear Rack T/FL correct?
YES
NO
Reassemble the Cam Mode, Gear Rack F/R.
Are the assembling conditions of Rack T Gear and Loading Gear correct?
NO
YES
Reassemble the Rack-T and Gear Loading.
1. Does the Gear Loading Assembly(L),(R) spin smoothly?
2. Confirm whether the Loading Gear(L), (R) is contact with other parts during operation.
YES
NO
Replace the Loading Gear Assembly.
Check that the T/Up Arm is fixed by stopper when the pinch Gear is Lower down.
YES
NO
Reassemble the T/Up Arm and Lever T/UP.
Is the Idler Gear separated from the Supply Reel?(Confirm whether the Capstan Motor turns or not)
NO
1. Confirm the conditions of Clutch Bracket ASS'Y and Reel Belt.
2. Replace the Capstan Motor.

2. Front Loading Mechanism

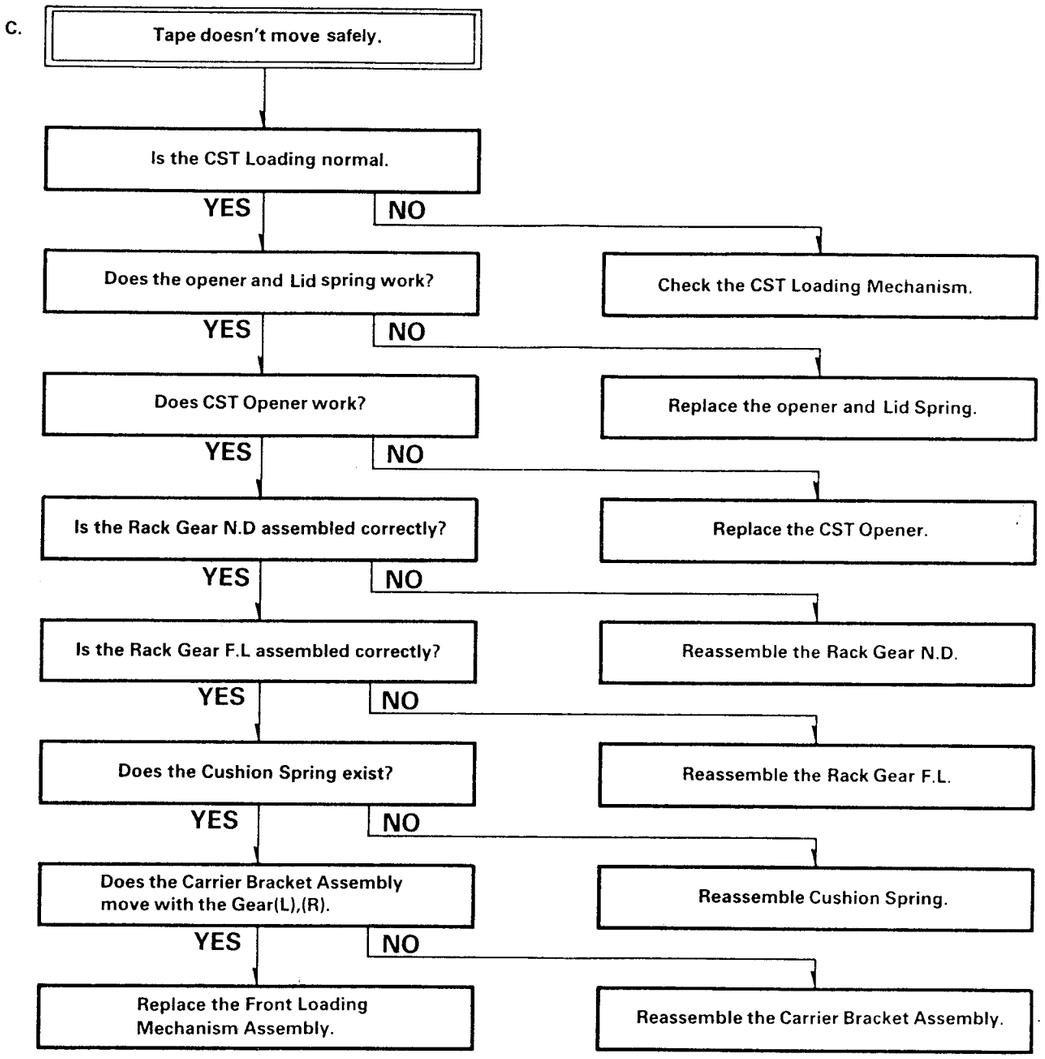
A.



B.



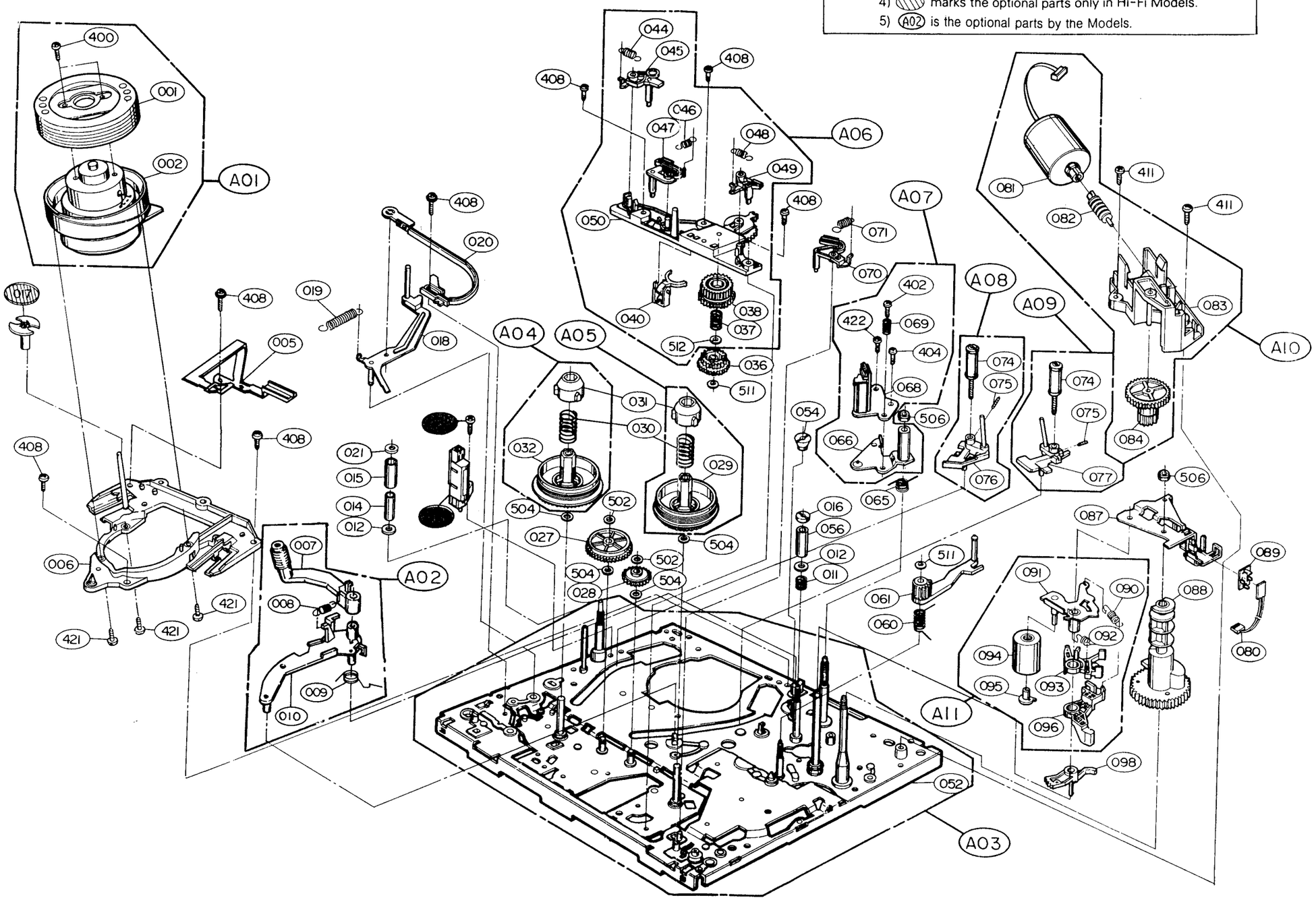
C.



EXPLODED VIEW

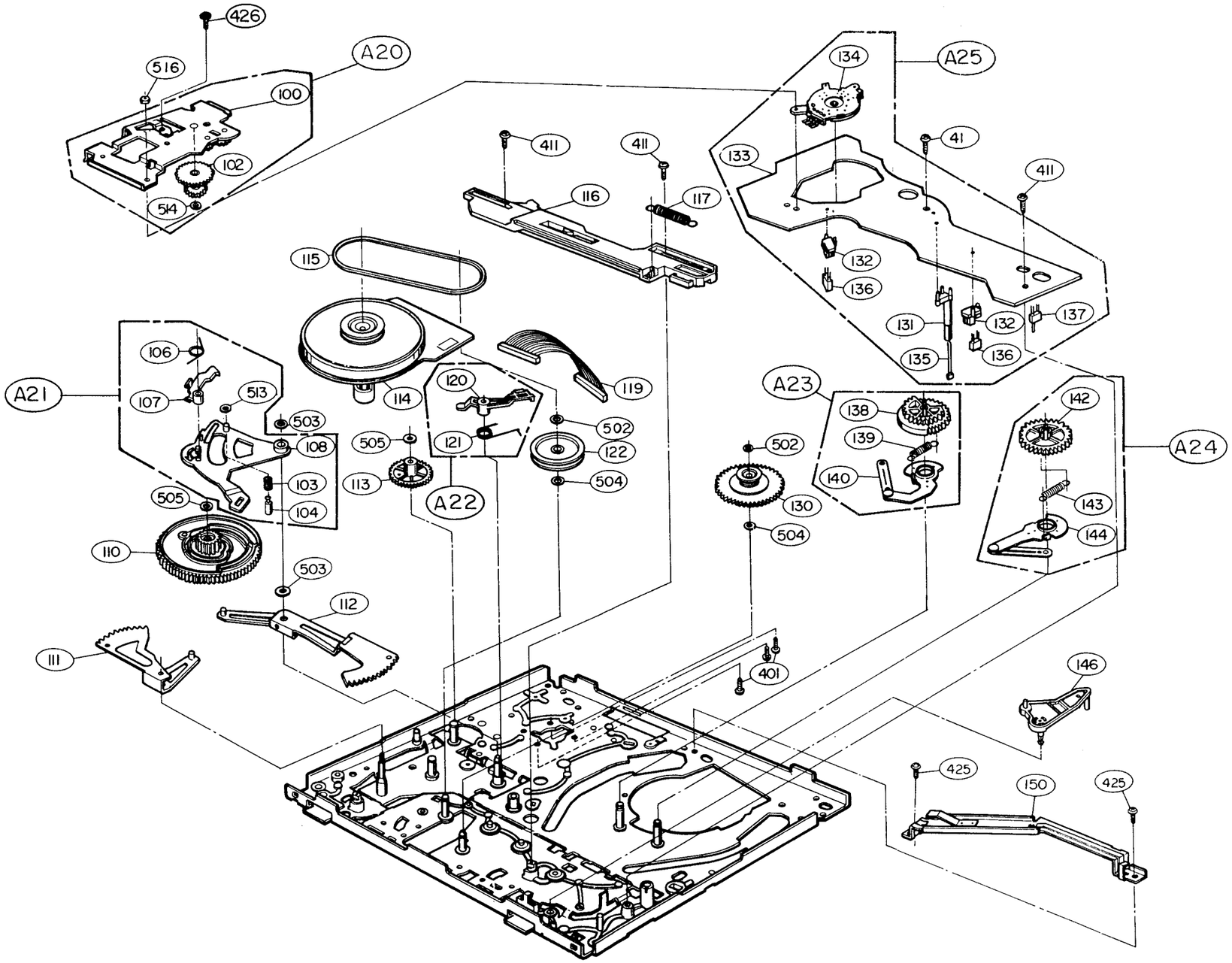
1. Moving Mechanism Section(I)

NOTE) 1) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.
2) ● marks the optional parts only in VCR(Video Cassette Recorders) Models.
3) ▨ marks the optional parts only in VCP(Video Cassette Player) Models.
4) ▨ marks the optional parts only in Hi-Fi Models.
5) (A02) is the optional parts by the Models.



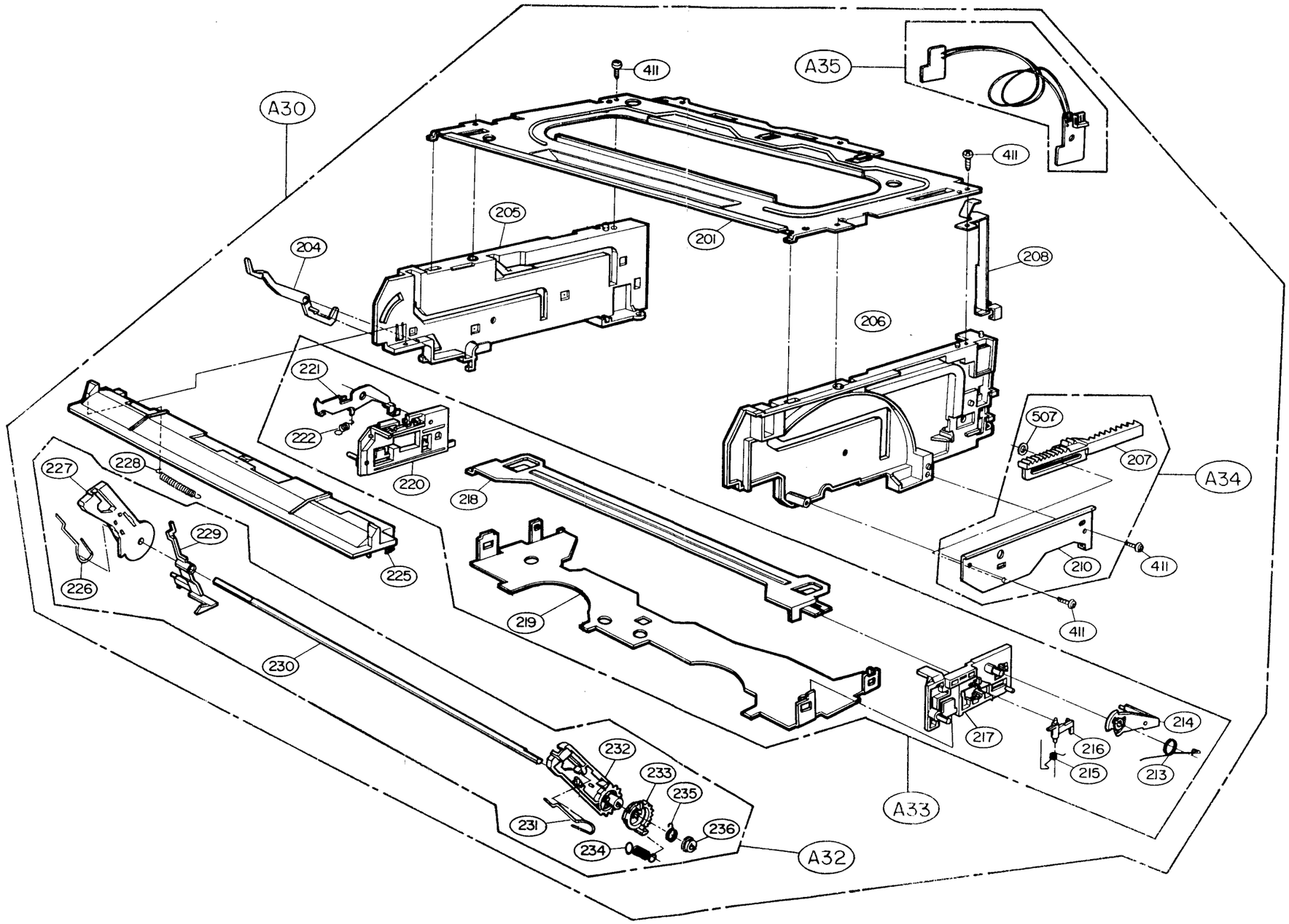
2. Moving Mechanism Section(Ⅱ)

NOTE) 1) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.



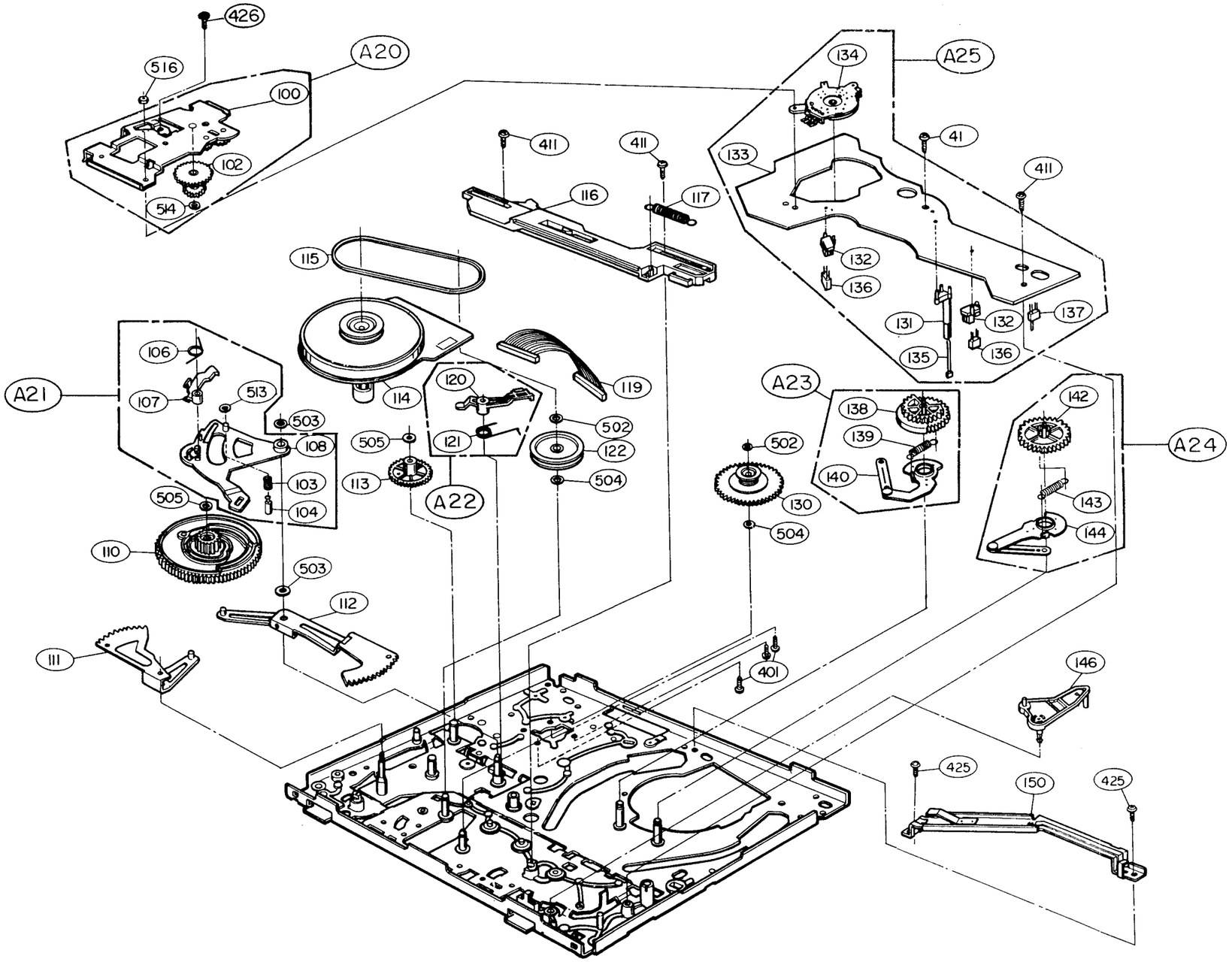
3. Front Loading Mechanism Section

NOTE) 1) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.



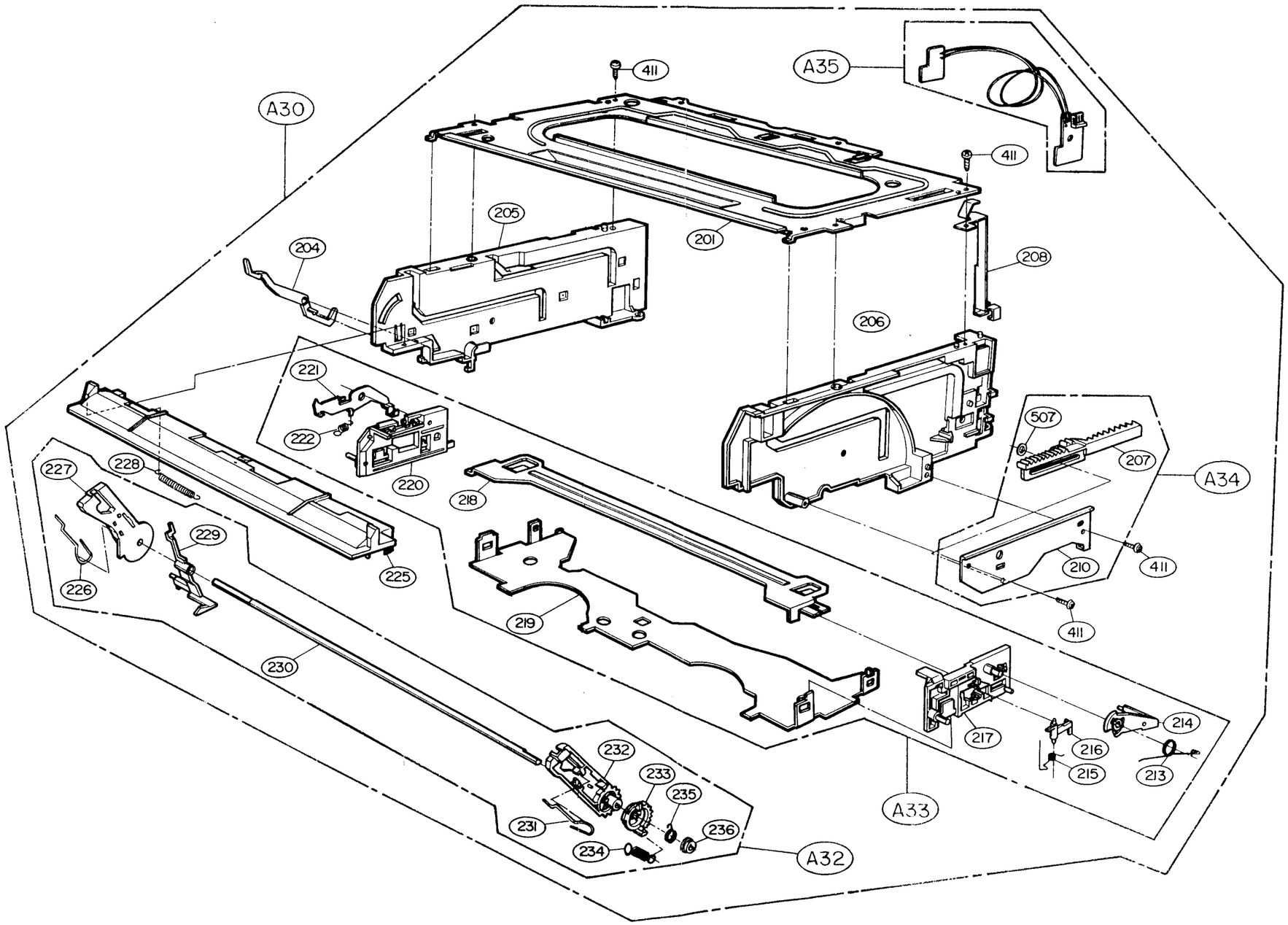
2. Moving Mechanism Section(Ⅱ)

NOTE) 1) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.



3. Front Loading Mechanism Section

NOTE) 1) Refer to "SECTION 5 REPLACEMENT PARTS LIST" in order to look for the part number of each part.



SECTION 5
REPLACEMENT PARTS LIST

• Mechanical Section

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
				ASSEMBLY PARTS SECTION		
		A00	412-129A	DECK	ASSY D-17 P (2HD VCP PAL)	
		A01	413-219A	DRUM	ASSY (D17-2CH:PAL SP ONLY)	
		A02	386-296A	ARM	ASSY CL	
		A03	311-005A	CHASSIS ASSY'		NSP
	OR	A03	311-005B	CHASSIS ASSY'		NSP
		A04	456-048A	REEL	ASSY SUPPLY POM 7G	
		A05	456-045A	REEL	ASSY T/UP POM 7G	
		A06	321-397D	BRACKET	ASSY F/R	
		A07	225-228B	BASE	ASSY A/C	
	OR	A08	225-248A	BASE	ASSY P2 (W-W)	
		A08	225-248B	BASE	ASSY P2 (W-W)	
	OR	A09	225-249A	BASE	ASSY P3 (W-W)	
		A09	225-249B	BASE	ASSY P3 (W-W)	
		A10	414-104A	MOTOR	ASSY LOAD	
		A11	333-209E	LEVER	ASSY PINCH	
		A20	321-401A	BRACKET	ASSY BOTTOM	
		A21	333-208A	LEVER	ASSY RAT	
		A22	338-078A	BRAKE	ASSY CAP	
		A23	386-218A	ARM	ASSY LOAD(R)	
		A24	386-219A	ARM	ASSY LOAD(L)	
		A25	511-997C	PWB ASSY	D-17, VCP	
		A30	219-017F	HOUSING	ASSY (D17)	
		A32	435-257B	GEAR	ASSY DRIVE (HOOK ADDED)	
		A33	321-406A	BRACKET	ASSY CARRIER	
		A34	321-441A	BRACKET	ASSY SIDE	
		A35	515-106A	PWB ASSY	SENSOR	
				PARTS SECTION		
		001	413-159E	DRUM	ASSY UPPER (PAL-2CH:SP ONLY)	
		002	413-218A	DRUM	ASSY LOWER (D17-2CH)	
		005	225-231A	BASE	ASSY D-BRUSH	
	OR	006	225-220A	BASE	DRUM (W-W)	NSP
		006	225-220B	BASE	DRUM (W-W)	NSP
	OR	006	225-220C	BASE	DRUM (W-W)	NSP
		007	386-297A	ARM	SUB ASSY CU	
		008	442-460B	SPRING	CU	
		009	442-459A	SPRING	CL	
		010	386-295A	ARM	CL	
		011	442-161A	SPRING	P14	
		012	384-071A	GUIDE	17	
		014	378-017A	SLEEVE	P1	
		015	434-178A	ROLLER	P1	
	OR	015	434-178B	ROLLER	P1	
		016	389-003B	ADJUST	P(4)	
		018	386-205A	ARM	ASSY TENSION	
		019	442-331C	SPRING	TENSION	
		020	328-052B	BAND	ASSY TENSION	
		021	334-066A	STOPPER	P1	

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		027	435-243A	GEAR	IDLE A POM 3G	
		028	435-244A	GEAR	IDLE B POM 3G	
		029	456-040A	REEL	T17	NSP
		030	442-341A	SPRING	REEL	NSP
		031	276-068A	CAP	REEL	NSP
		032	456-039A	REEL	S17	NSP
		036	435-240A	GEAR	F/R POM 3G	
		037	442-336A	SPRING	UP/D	NSP
		038	435-239A	GEAR	UP/D POM 3G	NSP
		040	333-201B	LEVER	ASSY F/R	NSP
		044	442-338B	SPRING	SSB	NSP
		045	338-081A	BRAKE	S-SOFT	NSP
		046	442-337A	SPRING	SMB	NSP
		047	338-080A	BRAKE	ASSY S-MAIN	NSP
		048	442-339D	SPRING	TSB	NSP
		049	338-083A	BRAKE	ASSY T-SOFT	NSP
		050	321-396A	BRACKET	SUB ASSY F/R	NSP
		052	313-022A	CHASSIS	OUTSERT	NSP
		054	389-013A	ADJUST	X-ASSY	
		056	378-018A	SLEEVE	P4	
		060	442-343A	SPRING	T/UP	
		061	386-387A	ARM	ASSY T/UP	
		065	442-332A	SPRING	A/C	
		066	225-219A	BASE	SUB ASSY A/C	NSP
		068	523-089B	HEAD	SUB ASSY A/C	
		069	442-362A	SPRING	AZIMUTH	
		070	338-085A	BRAKE	ASSY T-MAIN	
		071	442-344A	SPRING	TMB	
		074	434-173A	ROLLER	ASSY GUIDE	
		075	353-054B	SCREW	MINIATURE	
		076	225-226B	BASE	SUB ASSY SLALT (L,W-W)	
		077	225-225B	BASE	SUB ASSY SLALT (R,W-W)	
		080	657-116B	SENSOR	SENSOR DEW TD-P2004	
		081	414-105A	MOTOR	SUB ASSY,L	
		082	437-009A	WORM	ASSY	
		083	321-410A	BRACKET	SUB ASSY L/M	
		084	433-023A	WHEEL	WORM	
		087	321-470B	BRACKET	ASSY DEW	
	OR	088	435-245B	GEAR	PINCH	
		088	435-245D	GEAR	PINCH	
		089	324-354A	HOLDER	DEW	
		090	442-347A	SPRING	PINCH	NSP
		091	386-210A	ARM	ASSY PINCH	NSP
		092	442-346A	SPRING	STOPPER	NSP
		093	334-050C	STOPPER	PINCH	NSP
	OR	094	434-181A	ROLLER	PINCH D14 X L18	
		094	434-181B	ROLLER	PINCH D14 X L18	
		095	276-089B	CAP	PINCH	NSP
		096	333-203A	LEVER	PINCH	NSP
		098	333-301A	LEVER	T/UP (N)	
		100	321-463A	BRACKET	SUB ASSY B	NSP
		102	435-249A	GEAR	RAT1	NSP
		103	442-356A	SPRING	F-LEVER	NSP
		104	356-208A	PIN	F-LEVER	NSP
		106	442-345A	SPRING	RAT	NSP

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		107	333-202A	LEVER	RAT	NSP
		108	333-207A	LEVER	F17	NSP
		110	374-005A	CAM	D17 POM 10G	
		111	435-318A	GEAR	ASSY RACK F/L	
		112	435-291A	GEAR	ASSY RACK T	
		113	435-246A	GEAR	PC POM 3G	
		114	414-120B	MOTOR	CAPSTAN GVC-017P	
		115	452-047A	BELT	CENTER D71.9 X SQRT2.0	
		116	256-734A	PLATE	F17	
		117	442-342B	SPRING	FP	
		120	338-089A	BRAKE	SUB ASSY CAP	
		121	442-333A	SPRING	CAPSTAN	
		122	432-038A	PULLEY	GEAR POM 3G	
		130	337-005A	CLUTCH	ASSY POM 7G FELT 20X1X1T 2EA	
		131	324-643A	HOLDER	LED	
		132	324-642A	HOLDER	R/S	
		133	513-494C	PWB	JUNCTION D-17 VCP	NSP
		134	556-133A	SWITCH	MODE	
	OR	134	556-133B	SWITCH	MODE	
	OR	135	0DL451000AA	DIODE LED	IR SENSOR EL-55L(LONG) KOC	
		135	0DL550000AB	DIODE LED	IR SENSOR EL-55L(LONG) KOC	
		136	657-102K	SENSOR	SG-105(REEL) D-16 KOC	
		137	556-131A	SWITCH	ESE-105SV1	
		138	435-234A	GEAR	LOAD(R)	
		139	442-330A	SPRING	LOADING	
		140	386-274A	ARM	SUB ASSY (R)	
		142	435-235A	GEAR	LOAD(L)	
		143	442-330B	SPRING	LOADING	
		144	386-273A	ARM	SUB ASSY (L)	
		146	333-218A	LEVER	ASSY A-TEN	
		150	321-527A	BRACKET	ASSY C-GUIDE	
		201	256-934B	PLATE	TOP	
		204	465-026A	OPENER	DOOR	
		205	321-517B	BRACKET	LEFT (D17)	
		206	321-518A	BRACKET	RIGHT (D17)	
		207	435-278A	GEAR	RACK N/D	
		208	256-910A	PLATE	GND TOP	
		210	321-440A	BRACKET	SIDE	
		213	442-351A	SPRING	OC	NSP
		214	465-028A	OPENER	CST	NSP
		215	442-357A	SPRING	RID	NSP
		216	465-027A	OPENER	RID	NSP
		217	324-647A	HOLDER	R	NSP
		218	321-407A	BRACKET	SUPPORT	NSP
		219	321-405A	BRACKET	CARRIER	NSP
		220	324-646A	HOLDER	L	NSP
		221	333-210A	LEVER	DT	NSP
		222	442-358B	SPRING	DT	NSP
		225	384-074A	GUIDE	CST	
		226	442-352A	SPRING	L	NSP
		227	435-254A	GEAR	L	NSP
		228	442-350A	SPRING	S/W	
		229	333-204A	LEVER	S/W	NSP
		230	423-368A	SHAFT	D	NSP
		231	442-353A	SPRING	R	NSP

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		232	435-255A	GEAR	R	NSP
		233	435-256B	GEAR	C (HOOK ADDED)	NSP
		234	442-359C	SPRING	CUSHION (D17F/L)	NSP
		235	442-354A	SPRING	CC	NSP
		236	276-086A	CAP	DRIVE	NSP
SCREW						
		400	1MDC0302418	PAN HEAD MACHINE SCREW P/WASH+	D 3.0 L 8.0 MSWR3/FZY	
		401	1MPK0261418	PAN HEAD MACHINE SCREW +,-	D 2.6 L 4.0 MSWR3/FZY	
		402	353-021D	SCREW	SPECIAL	
		403	1MPC0302418	PAN HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		404	353-048C	SCREW	CONE POINT 3X10	
		408	1MBC0302418	BINDING HEAD MACHINE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		411	353-046B	SCREW	SPECIAL (3X8 FZMY)	
		412	1MBC0302818	BINDING HEAD MACHINE SCREW +	D 3.0 L 12 MSWR3/FZY	
		421	1MPC0302618	PAN HEAD MACHINE SCREW +	D3.0 L10.0,MSWR3/FZY	
		425	1SRF0302418	BRAIZER HD TAP TITE SCREW +	D 3.0 L 8.0 MSWR3/FZY	
		426	1MPC0302018	PAN HEAD MACHINE SCREW +	D 3.0 L 6.0 MSWR3/FZY	
NUT, WASHER						
		502	354-020D	WASHER	STOPPER	
		503	354-020E	WASHER	STOPPER	
		504	354-001B	WASHER	P.S D3.1XD6X0.5T	
		505	354-080E	WASHER	STOPPER	
		506	352-025A	NUT	NYLON M3	
		507	354-020J	WASHER	STOPPER(2.6X4.8X0.5)	
		511	354-080C	WASHER	STOPPER	
		512	354-080E	WASHER	STOPPER	NSP
		513	354-080A	WASHER	STOPPER	NSP
		514	354-080B	WASHER	STOPPER	NSP
		516	334-058A	STOPPER	A/C TERMINAL	

· Cabinet & Main Frame Section

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
ASSEMBLY PARTS SECTION						
		A43	258-543C	PANEL	ASSY FRONT	
		A44	232-572B	BOARD ASSY	POWER1 (P-500P)	
		A46	232-962A	BOARD ASSY	MAIN	
PARTS SECTION						
		250	217-440A	CASE	TOP	
		260	315-286A	FRAME	MAIN	NSP
		268	255-235A	PLATE	SIDE(FTZ)	
		282	221-762C	COVER	ASSY DOOR	
		283	226-052R	DOOR	CST	
		284	442-370A	SPRING	DOOR	
		287	524-007M	MAGNET	ASSY DOOR	

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		903	221-716A	COVER	BATTERY	
		904	236-397A	WINDOW	FILTER	NSP
		905	556-183A	SWITCH	CONDUCTIVE RUBBER	NSP
		906	442-494A	SPRING	BATTERY	NSP
		909	515-653A	PWB ASSY	R/C(PAL) P5 P-500P'S	NSP

· Jig Section

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		JIG	960-014A	JIG	SVC JIG P-500P'S	
		JIG1	232-687A	BOARD ASSY	SVC JIG "1" P-500P'S	
		JIG2	515-687B	PWB ASSY	SVC JIG "2" P-500P'S	

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		288	435-233B	GEAR	DAMPER	
		289	255-119A	PLATE	DAMPER	NSP
		300	681-051A	CORD	KKP-419J B-172 KLCE-2F PAL	
		303	256-743C	PLATE	HEAT SINK	
		304	221-407A	COVER	FUSE	
		305	884-010A	TUBE	TUBE-Y (PAL,POWER BOARD)DONG/B	
		306	221-504A	COVER	INSULATION	
		307	255-237A	PLATE	POWER GND	
		309	321-605A	BRACKET	HOUSING	
		311	221-761A	COVER	PRE-AMP	
		313	321-578A	BRACKET	DECK	
		314	255-116A	PLATE	DECK GND	
		320	258-544G	PANEL	ASSY DISTRIBUTOR	
		321	256-812A	PLATE	A/V JACK	
		322	515-660A	PWB ASSY	ASSY JUNCTION 2 (D-17P)	
		323	324-854A	HOLDER	LED (L,R)	
		325	504-573A	PWB	LED-BOARD (P-500P)	
		326	324-853A	HOLDER	LED(MIDI)	
		327	321-483A	BRACKET	AV JACK	
		330	221-760A	COVER	BOTTOM	
SCREW						
		451	353-046C	SCREW	(3X10 FZMY)	
		451	353-051A	SCREW	SPECIAL	
		452	353-051A	SCREW	SPECIAL	
		456	353-046F	SCREW	SPECIAL (4X12 FZMY)	
		457	353-051B	SCREW	SPECIAL	
		462	353-136A	SCREW	SPECIAL(FBK) (353S353A)	
		471	1MPC0302018	PAN HEAD MACHINE SCREW +	D 3.0 L 6.0 MSWR3/FZY	

· Packing Accessory Section

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		801	480-394F	INSTRUCTION ASSY		
		802	288-531A	BOX CARTON		
		803	283-202A	PACKING		
		804	291-002A	SHEET CUSHION		NSP
		808	534-008C	BATTERY	AAAM(R03) 1.5V 1PAIR(LOCAL)	
		810	861-505B	CABLE SET ASSY	RF-CABLE,ASSY,PAL	

· Remocon Control Section

RUN DATE : 93.01.14
NSP: Not Service Part

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		900	597-067A	REMOTE CONTROL	ASSY (P5R/C)	
		901	221-709A	COVER	TOP	NSP
		902	221-710A	COVER	BOTTOM	NSP

· Electrical Section

RUN DATE : 93.01.14

CAUTION: The * marks in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. Before replacing any of these components, read carefully the SAFETY PRECAUTIONS and SERVICING PRECAUTIONS in the manual. Do not degrade the safety of the unit through improper servicing.

Tolerance

Symbol	C	J	K	M	N	Z	P	A
%	±2	±5	±10	±20	±30	+80 -20	+100 -10	+100 -10

CC, CJ, CK: Capacitor, Ceramic
CE: Capacitor, Electrolytic
CQ: Capacitor, Polyester

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
			CAPACITOR	
		C101	624-018A	LINE DE7100 FZ 472P VA1-KC
	OR	C101	624-018D	LINE DE7100 FZ 472P VA1-KC
		C102	624-018A	LINE DE7100 FZ 472P VA1-KC
	OR	C102	624-018D	LINE DE7100 FZ 472P VA1-KC
		C103	0CK2230K940	0.022M 50V Z F S
		C111	0CE4766F638	47M SMS 16V M FM5 TP5
		C112	0CE4766F638	47M SMS 16V M FM5 TP5
		C113	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C114	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C115	0CE3386H610	3300M SMS 25V M FL
		C116	0CK1040K945	0.1M 50V Z F TS
		C117	0CN1030F678	0.01M 16V M Y TA26
		C118	0CE4774F638	470M SRA 16V M FM5 TP(5)
		C301	0CK2230K945	0.022M 50V Z F TS
		C302	0CC3910K405	390P 50V J SL TP
		C303	0CX6800K408	68P 50V J SL TA26
		C304	0CX3900K408	39P 50V J SL TA26
		C305	0CC1810K405	180P 50V J SL TP
		C306	0CC1000K115	10P 50V D NP0 TS
		C307	0CE1066H638	10M SMS 25V M FM5 TP
		C308	0CE1054K638	1.0M SRA/SS50V M FM5 TP(5)
		C309	0CX4700K408	47P 50V J SL TA26
		C310	0CN1010K518	100P 50V K B TA26
		C311	0CE1066H638	10M SMS 25V M FM5 TP
		C312	0CQ2731N409	0.027U 100V J POLY TP
		C313	0CN2230H948	0.022M 25V Z F TA26
		C314	0CN4710K518	470P 50V K B TA26
		C317	0CE1066H638	10M SMS 25V M FM5 TP
		C318	0CN2230H948	0.022M 25V Z F TA26
		C319	0CE1056K638	1.0M SMS 50V M FM5 TP(5)
		C320	0CE1056K638	1.0M SMS 50V M FM5 TP(5)
		C321	0CK2230K945	0.022M 50V Z F TS
		C322	0CK4730K945	0.047U 50V Z F TS
		C323	0CE4766F638	47M SMS 16V M FM5 TP5
		C324	0CE1066H638	10M SMS 25V M FM5 TP
		C325	0CE4766F638	47M SMS 16V M FM5 TP5
		C326	0CE4774F638	470M SRA 16V M FM5 TP(5)
		C327	0CE4766F638	47M SMS 16V M FM5 TP5
		C328	0CN2230H948	0.022M 25V Z F TA26
		C329	0CE4766F638	47M SMS 16V M FM5 TP5
		C330	0CE4766F638	47M SMS 16V M FM5 TP5
		C331	0CN2230H948	0.022M 25V Z F TA26
		C332	0CC2700K415	27P 50V J NP0 TP

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C333	0CC4700K415	47P 50V J NP0 TP
		C334	0CK1030K945	0.01M 50V Z F TS
		C335	0CK1030K945	0.01M 50V Z F TS
		C336	0CC8200K415	82P 50V J NP0 TP
		C337	0CX2400K408	24P 50V J SL TA26
		C338	0CE4766F638	47M SMS 16V M FM5 TP5
		C339	0CN2230H948	0.022M 25V Z F TA26
		C340	0CE1076F638	100M SMS 16V M FM5 TP(5)
		C341	0CK1030K945	0.01M 50V Z F TS
		C342	0CE4766F638	47M SMS 16V M FM5 TP5
		C343	0CN2230H948	0.022M 25V Z F TA26
		C344	0CE2276F638	220U SMS 16V M FM5 TP(5)
		C345	0CN1510K518	150P 50V K B TA26
		C346	0CQ6831N409	0.068U 100V J POLY TP
		C347	0CN2230H948	0.022M 25V Z F TA26
		C348	0CN2230H948	0.022M 25V Z F TA26
		C349	0CE4766F638	47M SMS 16V M FM5 TP5
		C350	0CE4766F638	47M SMS 16V M FM5 TP5
		C351	0CE3356K638	3.3M SMS 50V M FM5 TP(5)
		C352	0CE1056K638	1.0M SMS 50V M FM5 TP(5)
		C353	0CN1040K948	0.1M 50V Z F TA26
		C354	0CN1030F678	0.01M 16V M Y TA26
		C355	0CN8200K518	82PF 50V K B TA26
		C356	0CK1030K945	0.01M 50V Z F TS
		C357	0CE3366F638	33M SMS 16V M FM5 TP(5)
		C358	0CK1030K945	0.01M 50V Z F TS
		C359	0CN2230H948	0.022M 25V Z F TA26
		C360	0CN2230H948	0.022M 25V Z F TA26
		C361	0CE1056K638	1.0M SMS 50V M FM5 TP(5)
		C371	0CC0300K015	3P 50V C NP0 TS
		C372	0CN1030F678	0.01M 16V M Y TA26
		C373	0CC2200K415	24P 50V J NP0 TS
		C374	0CN1040K948	0.1M 50V Z F TA26
		C375	0CN1030F678	0.01M 16V M Y TA26
		C376	0CN1030F678	0.01M 16V M Y TA26
		C378	0CN2230H948	0.022M 25V Z F TA26
		C379	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C380	0CN1030F678	0.01M 16V M Y TA26
		C381	0CN1040K948	0.1M 50V Z F TA26
		C382	0CN1040K948	0.1M 50V Z F TA26
		C383	0CX2700K408	27P 50V J SL TA26
		C384	0CX3300K408	33P 50V J SL TA26
		C385	0CN1010K518	68P 50V K B TA26
		C386	0CN3310K518	330P 50V K B TA26
		C387	0CE4766F638	47M SMS 16V M FM5 TP5

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		C388	0CN2230H948	0.022M 25V Z F TA26
		C389	0CN1030F678	0.01M 16V M Y TA26
		C390	0CK1030K945	0.01M 50V Z F TS
		C391	0CN1030F678	0.01M 16V M Y TA26
		C401	0CE1076F638	100M SMS 16V M FM5 TP(5)
		C402	0CE4766F638	47M SMS 16V M FM5 TP5
		C403	0CE4756K638	4.7M SMS 50V M FM5 TP(5)
		C405	0CN1030F678	0.01M 16V M Y TA26
		C406	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C407	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C408	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C409	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C410	0CN1010K518	100P 50V K B TA26
		C411	0CN1030F678	0.01M 16V M Y TA26
		C412	0CK1010K515	100P 50V K B TS
		C413	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C414	0CN1520F668	1500P 16V M X TA26
		C415	0CE2264F638	22M SRA 16V M FM5 TP(5)
		C4A1	0CN1030F678	0.01M 16V M Y TA26
		C4A2	0CN1030F678	0.01M 16V M Y TA26
		C501	0CK2230K945	0.022M 50V Z F TS
		C502	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C503	0CQ1031N409	0.01U 100V J POLY TP
		C504	0CQ1031N409	0.01U 100V J POLY TP
		C505	0CQ4721N409	0.0047U 100V J POLY TP
		C506	0CQ4721N409	0.0047U 100V J POLY TP
		C507	0CQ1021N409	0.001U 100V J POLY TP
		C508	0CQ1031N409	0.01U 100V J POLY TP
		C509	0CQ1031N409	0.01U 100V J POLY TP
		C510	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C511	0CE1066H638	10M SMS 25V M FM5 TP
		C512	0CQ1031N409	0.01U 100V J POLY TP
		C513	0CN1030F678	0.01M 16V M Y TA26
		C514	0CE2264F638	22M SRA 16V M FM5 TP(5)
		C515	0CN1030F678	0.01M 16V M Y TA26
		C516	0CE1074F638	100U SRA 16V M FM5 TP(5)
		C517	0CN2230H948	0.022M 25V Z F TA26
		C518	0CN2230H948	0.022M 25V Z F TA26
		C519	0CQ1021N409	0.001U 100V J POLY TP
		C520	0CN1030F678	0.01M 16V M Y TA26
		C521	0CQ1041N409	0.1U 100V J POLY TP
		C522	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C523	0CE1064F638	10M SRA 16V M FM5 TP(5)
		C524	0CE4764F638	47M SRA/SS 16V M FM5 TP(5)
		C525	0CE1051K636	1.0U SM 50V M FM5 BP TP(D)
		C526	0CQ1031N409	0.01U 100V J POLY TP
		C527	0CE4741K636	0.47U SM 50V M FM5 BP.D TP(5)
		C528	0CQ4721N409	0.0047U 100V J POLY TP
		C529	0CE1066H638	10M SMS 25V M FM5 TP
		C530	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C531	0CE1056K638	1.0M SMS 50V M FM5 TP(5)
		C532	0CE1056K638	1.0M SMS 50V M FM5 TP(5)
		C533	0CN1030F678	0.01M 16V M Y TA26
		C534	0CN1040K948	0.1M 50V Z F TA26
		C535	0CN2230H948	0.022M 25V Z F TA26
		C536	0CN2230H948	0.022M 25V Z F TA26
		C537	0CN1030F678	0.01M 16V M Y TA26
		C538	0CN1030F678	0.01M 16V M Y TA26
		C539	0CC1200K415	12P 50V J NP0 TS
		C540	0CN1030F678	0.01M 16V M Y TA26
		C541	0CC1200K415	12P 50V J NP0 TS
		C543	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C544	0CN1030F678	0.01M 16V M Y TA26
		C545	0CN1030F678	0.01M 16V M Y TA26
		C546	0CN1030F678	0.01M 16V M Y TA26
		C547	0CE1051K636	1.0U SM 50V M FM5 BP TP(D)
		C548	0CN1010K518	100P 50V K B TA26
		C549	0CN2230H948	0.022M 25V Z F TA26
		C550	0CE4766F638	47M SMS 16V M FM5 TP5
		C551	0CN1030F678	0.01M 16V M Y TA26
		C552	0CN1030F678	0.01M 16V M Y TA26
		C553	0CE4754H638	4.7M SRA 25V M FM5 TP(5)
		C554	0CN1040K948	0.1M 50V Z F TA26
		C571	0CQ4731N409	0.047U 100V J POLY TP

DIODE

		D101	0DD207000AB	2A07 2A RECT(T/S)P=12.5 F DELT
		D102	0DD207000AB	2A07 2A RECT(T/S)P=12.5 F DELT
		D103	0DD207000AB	2A07 2A RECT(T/S)P=12.5 F DELT
		D104	0DD207000AB	2A07 2A RECT(T/S)P=12.5 F DELT
		D111	0DD400309AB	IN4003A(1SR35-200A)5M/M TP ROH
		D112	0DD400309AB	IN4003A(1SR35-200A)5M/M TP ROH
		D113	0DD400309AB	IN4003A(1SR35-200A)5M/M TP ROH
		D115	0DD400309AB	IN4003A(1SR35-200A)5M/M TP ROH
		D301	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D302	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D303	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D304	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D501	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D502	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D503	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D504	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D505	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D506	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D507	0DD400309AB	IN4003A(1SR35-200A)5M/M TP ROH
		D508	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D509	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D510	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM
		D511	0DD131009AA	1SS131 DETECT,SW(26MM)TP ROHM

DELAY LINE

		DL301	617-022B	ADL-FE 2245E PAL ASAHI GLASS

FUSE

*		F101	585-011L	T315 MA 250V BESWICK
	OR	F101	585-012L	T315 MA 250V BESWICK
		F102	585-011K	T2A, 250V (BESWICK)
*	OR	F102	585-012K	T2A, 250V (BESWICK)
		F103	585-011C	T 1.6A 250V S506
*	OR	F103	585-012C	T 1.6A 250V S506

FILTER

		FL101	616-004B	LINE 801-302-FD(BUJEON)
		FL301	616-064A	LPF 1.5MHZ (SANG SHIN)
		FL302	616-323A	SFE4.25MBF (MURATA)

IC

		IC111	0IKE780060A	KIA78006AP=KIA7806P(REG 6V 1A)
	OR	IC111	0IMA780600A	KIA78006AP=KIA7806P(REG 6V 1A)
	OR	IC111	0ISG780600A	KIA78006AP=KIA7806P(REG 6V 1A)
		IC301	0ISA739000A	LA7390(PAL,Y/C1CHIP)

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		IC302	0IRH702500A	BA7025L PAL/MESECAM SYNC DETEC
		IC303	0IKK740300B	MSM7403RS(2H CCD) DIP-PACK
		IC304	0ISA737600A	LA7376 2HD PRE-AMP
		IC501	0ISH820300K	LU8203 25,QFP(P-610M)
		IC502	0ISA711700A	LA7117 OP AMP
		IC503	0IMT523000C	PST-523D/T
		IC504	0IGS744500A	GL7445 (MOTOR DRIV-1CH) GSS
JACK				
		JK111	572-045A	HEC0470-01-230
		JK302	572-036F	BJP-202A
COIL				
		L301	0LA0332K018	33M K 2.3X3.4 L5 TP
		L302	0LR1000J025	100UH 5% 4X5 TR5
		L303	0LR1000J025	100UH 5% 4X5 TR5
		L304	0LR1000J025	100UH 5% 4X5 TR5
		L305	0LR1000J025	100UH 5% 4X5 TR5
		L306	0LR1000J025	100UH 5% 4X5 TR5
		L307	637-013B	PECK 6.80MH-J NYE
		L308	0LR1000J025	100UH 5% 4X5 TR5
		L309	0LA0272K018	27M K 2.3X3.4 L5 TP
		L310	0LA0472K018	47M K 2.3X3.4 L5 TP
		L311	0LA0152K018	15M K 2.3X3.4 L5 TP
		L312	0LA0682K018	68M K 2.3X3.4 L5 TP
		L313	0LR1000J025	100UH 5% 4X5 TR5
		L314	0LA0682K018	68M K 2.3X3.4 L5 TP
		L315	0LA0331K018	3.3UH K 2.3X3.4 L5 TP
		L321	0LA0332K018	33M K 2.3X3.4 L5 TP
		L322	0LR0682J025	68UH 5% 4X5 TR5
		L323	0LR1000J025	100UH 5% 4X5 TR5
		L324	0LA1800K018	180M K 2.3X3.4 L5 TP
		L325	0LR1000J025	100UH 5% 4X5 TR5
		L326	0LR0102J025	10UH 5% 4X5 TR5
		L4A1	0LA1000K018	100M K 2.3X3.4 L5 TP
		L4A2	636-010A	BEAD,BL01RN1-A62,MURATA
		L4A3	636-010A	BEAD,BL01RN1-A62,MURATA
		L501	0LR1000J025	100UH 5% 4X5 TR5
		L502	0LR1000J025	100UH 5% 4X5 TR5
		L503	0LR0562J025	56UH 5% 4X5 TR5
LED				
		LD501	0DL112000AL	DL-11S2RNSF(03 RED FORM) KOC
		LD502	0DL112000AM	DL-11S2GNSF(03 GREE FORM) KOC
		LD901	0DL112000AK	DL-11S2GNS(SUPPER,GREEN,03)KOC
		LD902	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD903	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD904	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD905	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
MODULATOR				
		MD301	592-808A	MCB8-UG3630 PAL B/G WO ATT
CONNECTOR				
		P1101	561-199F	52556-0710 (MOLEX)
		P1101	561-200F	53350-0710 (MOLEX)
		P3D01	561-103D	8370-051-000800 ELCO
		P5D03	561-059S	GB200-17P (GS-CABLE)

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		P5D04	561-059S	GB200-17P (GS-CABLE)
CIRCUIT BOARD ASSEMBLY				
		PBM00	515-962A	MAIN
		PBP00	515-572B	POWER1
TRANSFORMER				
	OR	PT101	641-041B	120V/230V/240V/50HZ
		PT101	641-341B	120V/230V/240V/50HZ
TRANSISTOR				
		Q111	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q112	0TR127309AA	KTA1273-TP-Y (KTA966A)KEC
	OR	Q113	0TR141400AA	2SD1933(R)POWER ROHM-J
		Q113	0TR193300AA	2SD1933(R)POWER ROHM-J
	OR	Q114	0TR141400AA	2SD1933(R)POWER ROHM-J
		Q114	0TR193300AA	2SD1933(R)POWER ROHM-J
		Q301	0TR126709AC	KTA1267-GR MINI TP KEC
		Q302	0TR126709AC	KTA1267-GR MINI TP KEC
		Q303	0TR126709AC	KTA1267-GR MINI TP KEC
		Q304	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q305	0TR319909AF	KTC3199-BL MINI TP KEC
		Q306	0TR126709AC	KTA1267-GR MINI TP KEC
		Q307	0TR319909AF	KTC3199-BL MINI TP KEC
		Q311	0TR126709AC	KTA1267-GR MINI TP KEC
		Q312	0TR319909AF	KTC3199-BL MINI TP KEC
		Q313	0TR319909AF	KTC3199-BL MINI TP KEC
		Q314	0TR319909AF	KTC3199-BL MINI TP KEC
		Q315	0TR319909AF	KTC3199-BL MINI TP KEC
		Q316	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q401	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q402	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q403	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q404	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q405	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q406	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q409	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q501	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q502	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q503	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q505	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q506	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q507	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q508	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q509	0TR103009AE	KRC103M-TP (KRC1203) KEC
RESISTOR				
		R111	0RD1001F608	1.0K 1/6W 5 TA26
		R112	0RD1001F608	1.0K 1/6W 5 TA26
		R113	0RD4701F608	4.7K 1/6W 5 TA26
		R114	0RD2202F608	22K 1/6W 5 TA26
		R301	0RD5601F608	5.6K 1/6W 5 TA26
		R302	0RD5601F608	5.6K 1/6W 5 TA26
		R303	0RD1001F608	1.0K 1/6W 5 TA26
		R304	0RD6800F608	680 1/6W 5 TA26
		R305	0RD1001F608	1.0K 1/6W 5 TA26
		R306	0RD4701F608	4.7K 1/6W 5 TA26
		R307	0RD1201F608	1.2K 1/6W 5 TA26
		R308	0RD0752F608	75 1/6W 5 TA26
		R309	0RD8201F608	8.2K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R310	0RD2201F608	2.2K 1/6W 5 TA26
		R311	0RD2201F608	2.2K 1/6W 5 TA26
		R312	0RD2701F608	2.7K 1/6W 5 TA26
		R313	0RD1004F608	1.0M 1/6W 5 TA26
		R315	0RD3301F608	3.3K 1/6W 5 TA26
		R316	0RD2201F608	2.2K 1/6W 5 TA26
		R317	0RD1202F608	12K 1/6W 5 TA26
		R318	0RD1002F608	10K 1/6W 5 TA26
		R319	0RD1002F608	10K 1/6W 5 TA26
		R320	0RD1001F608	1.0K 1/6W 5 TA26
		R321	0RD2202F608	22K 1/6W 5 TA26
		R323	0RD3301F608	3.3K 1/6W 5 TA26
		R324	0RD4701F608	4.7K 1/6W 5 TA26
		R325	0RD5601F608	5.6K 1/6W 5 TA26
		R326	0RD2202F608	22K 1/6W 5 TA26
		R328	0RD1501F608	1.5K 1/6W 5 TA26
		R329	0RD2700F608	270 1/6W 5 TA26
		R330	0RD1201F608	1.2K 1/6W 5 TA26
		R331	0RD1001F608	1.0K 1/6W 5 TA26
		R332	0RD1803F608	180K 1/6W 5 TA26
		R333	0RD2201F608	2.2K 1/6W 5 TA26
		R334	0RD1001F608	1.0K 1/6W 5 TA26
		R335	0RD1001F608	1.0K 1/6W 5 TA26
		R336	0RD3900F608	390 1/6W 5 TA26
		R340	0RD4701F608	4.7K 1/6W 5 TA26
		R341	0RD2700F608	270 1/6W 5 TA26
		R342	0RD3300F608	330 1/6W 5 TA26
		R343	0RD0222F608	22 1/6W 5 TA26
		R344	0RD2201F608	2.2K 1/6W 5 TA26
		R345	0RD1503F608	150K 1/6W 5 TA26
		R346	0RD1002F608	10K 1/6W 5 TA26
		R347	0RD1802F608	18K 1/6W 5 TA26
		R348	0RD1002F608	10K 1/6W 5 TA26
		R351	0RD1001F608	1.0K 1/6W 5 TA26
		R352	0RD2201F608	2.2K 1/6W 5 TA26
		R353	0RD2201F608	2.2K 1/6W 5 TA26
		R354	0RD1201F608	1.5K 1/6W 5 TA26
		R355	0RD3300F608	330 1/6W 5 TA26
		R356	0RD3900F608	390 1/6W 5 TA26
		R357	0RD6801F608	6.8K 1/6W 5 TA26
		R358	0RD1202F608	12K 1/6W 5 TA26
		R359	0RD2202F608	22K 1/6W 5 TA26
		R360	0RD5601F608	5.6K 1/6W 5 TA26
		R361	0RD2201F608	2.2K 1/6W 5 TA26
		R362	0RD1001F608	1.0K 1/6W 5 TA26
		R363	0RD2700F608	270 1/6W 5 TA26
		R365	0RD1001F608	560 1/6W 5 TA26
		R366	0RD2201F608	2.2K 1/6W 5 TA26
		R367	0RD1001F608	1.0K 1/6W 5 TA26
		R368	0RD3902F608	39K 1/6W 5 TA26
		R369	0RD2201F608	2.2K 1/6W 5 TA26
		R370	0RD4700F608	470 1/6W 5 TA26
		R371	0RD1001F608	1.0K 1/6W 5 TA26
		R372	0RD1502F608	15K 1/6W 5 TA26
		R373	0RD3901F608	3.9K 1/6W 5 TA26
		R374	0RD3302F608	33K 1/6W 5 TA26
		R375	0RD1001F608	1.0K 1/6W 5 TA26
		R401	0RD4700F608	470 1/6W 5 TA26
		R402	0RD1501F608	1.5K 1/6W 5 TA26
		R403	0RD3902F608	39K 1/6W 5 TA26
		R404	0RD4701F608	4.7K 1/6W 5 TA26
		R405	0RD3301F608	3.3K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R406	0RD3900F608	390 1/6W 5 TA26
		R407	0RD3303F608	330K 1/6W 5 TA26
		R408	0RD4701F608	4.7K 1/6W 5 TA26
		R409	0RD3902F608	39K 1/6W 5 TA26
		R410	0RD0682F608	68 1/6W 5 TA26
		R411	0RD3303F608	330K 1/6W 5 TA26
		R412	0RD1802F608	18K 1/6W 5 TA26
		R413	0RD3303F608	330K 1/6W 5 TA26
		R414	0RD1001F608	1.0K 1/6W 5 TA26
		R415	0RD4701F608	4.7K 1/6W 5 TA26
		R416	0RD4701F608	4.7K 1/6W 5 TA26
		R417	0RD1001F608	1.0K 1/6W 5 TA26
		R418	0RD2201F608	2.2K 1/6W 5 TA26
		R420	0RD5600F608	560 1/6W 5 TA26
		R421	0RD1001F608	1.0K 1/6W 5 TA26
		R422	0RD5600F608	560 1/6W 5 TA26
		R423	0RD1001F608	1.0K 1/6W 5 TA26
		R501	0RD2701F608	2.7K 1/6W 5 TA26
		R502	0RD2201F608	2.2K 1/6W 5 TA26
		R503	0RD2701F608	2.7K 1/6W 5 TA26
		R504	0RD2201F608	2.2K 1/6W 5 TA26
		R505	0RD1002F608	10K 1/6W 5 TA26
		R506	0RD2201F608	2.2K 1/6W 5 TA26
		R507	0RD1002F608	10K 1/6W 5 TA26
		R508	0RD1002F608	10K 1/6W 5 TA26
		R509	0RD1003F608	100K 1/6W 5 TA26
		R510	0RD2202F608	22K 1/6W 5 TA26
		R511	0RD4702F608	47K 1/6W 5 TA26
		R512	0RD2202F608	22K 1/6W 5 TA26
		R513	0RD6803F608	680K 1/6W 5 TA26
		R514	0RD4702F608	47K 1/6W 5 TA26
		R515	0RD4703F608	470K 1/6W 5 TA26
		R516	0RD4700F608	470 1/6W 5 TA26
		R517	0RD1003F608	100K 1/6W 5 TA26
		R518	0RD1001F608	1.0K 1/6W 5 TA26
		R519	0RD3303F608	330K 1/6W 5 TA26
		R520	0RD3300F608	330 1/6W 5 TA26
		R521	0RD1001F608	1.0K 1/6W 5 TA26
		R522	0RD1004F608	1.0M 1/6W 5 TA26
		R523	0RD2203F608	220K 1/6W 5 TA26
		R524	0RD2201F608	2.2K 1/6W 5 TA26
		R525	0RD5602F608	56K 1/6W 5 TA26
		R526	0RD1002F608	10K 1/6W 5 TA26
		R527	0RD1003F608	100K 1/6W 5 TA26
		R528	0RD4701F608	4.7K 1/6W 5 TA26
		R529	0RD1004F608	1.0M 1/6W 5 TA26
		R530	0RD2200F608	220 1/6W 5 TA26
		R531	0RD1001F608	1.0K 1/6W 5 TA26
		R532	0RD1001F608	1.0K 1/6W 5 TA26
		R533	0RD4701F608	4.7K 1/6W 5 TA26
		R534	0RD4701F608	4.7K 1/6W 5 TA26
		R535	0RD6801F608	6.8K 1/6W 5 TA26
		R536	0RD1004F608	1.0M 1/6W 5 TA26
		R537	0RD1002F608	10K 1/6W 5 TA26
		R538	0RD1002F608	10K 1/6W 5 TA26
		R539	0RD1002F608	10K 1/6W 5 TA26
		R540	0RD1002F608	10K 1/6W 5 TA26
		R541	0RD2702F608	27K 1/6W 5 TA26
		R542	0RD1001F608	1.0K 1/6W 5 TA26
		R543	0RD1501F608	1.5K 1/6W 5 TA26
		R544	0RD2702F608	27K 1/6W 5 TA26
		R545	0RD3302F608	33K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		IC302	0IRH702500A	BA7025L PAL/MESECAM SYNC DETEC
		IC303	0IKK740300B	MSM7403RS(2H CCD) DIP-PACK
		IC304	0ISA737600A	LA7376 2HD PRE-AMP
		IC501	0ISH820300K	LU8203 25,QFP(P-610M)
		IC502	0ISA711700A	LA7117 OP AMP
		IC503	0IMT523000C	PST-523D/T
		IC504	0IGS744500A	GL7445 (MOTOR DRIV-1CH) GSS
JACK				
		JK111	572-045A	HEC0470-01-230
		JK302	572-036F	BJP-202A
COIL				
		L301	0LA0332K018	33M K 2.3X3.4 L5 TP
		L302	0LR1000J025	100UH 5% 4X5 TR5
		L303	0LR1000J025	100UH 5% 4X5 TR5
		L304	0LR1000J025	100UH 5% 4X5 TR5
		L305	0LR1000J025	100UH 5% 4X5 TR5
		L306	0LR1000J025	100UH 5% 4X5 TR5
		L307	637-013B	PECK 6.80MH-J NYE
		L308	0LR1000J025	100UH 5% 4X5 TR5
		L309	0LA0272K018	27M K 2.3X3.4 L5 TP
		L310	0LA0472K018	47M K 2.3X3.4 L5 TP
		L311	0LA0152K018	15M K 2.3X3.4 L5 TP
		L312	0LA0682K018	68M K 2.3X3.4 L5 TP
		L313	0LR1000J025	100UH 5% 4X5 TR5
		L314	0LA0682K018	68M K 2.3X3.4 L5 TP
		L315	0LA0331K018	3.3UH K 2.3X3.4 L5 TP
		L321	0LA0332K018	33M K 2.3X3.4 L5 TP
		L322	0LR0682J025	68UH 5% 4X5 TR5
		L323	0LR1000J025	100UH 5% 4X5 TR5
		L324	0LA1800K018	180M K 2.3X3.4 L5 TP
		L325	0LR1000J025	100UH 5% 4X5 TR5
		L326	0LR0102J025	10UH 5% 4X5 TR5
		L4A1	0LA1000K018	100M K 2.3X3.4 L5 TP
		L4A2	636-010A	BEAD,BL01RN1-A62,MURATA
		L4A3	636-010A	BEAD,BL01RN1-A62,MURATA
		L501	0LR1000J025	100UH 5% 4X5 TR5
		L502	0LR1000J025	100UH 5% 4X5 TR5
		L503	0LR0562J025	56UH 5% 4X5 TR5
LED				
		LD501	0DL112000AL	DL-11S2RNSF(03 RED FORM) KOC
		LD502	0DL112000AM	DL-11S2GNSF(03 GREE FORM) KOC
		LD901	0DL112000AK	DL-11S2GNS(SUPPER,GREEN,03)KOC
		LD902	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD903	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD904	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD905	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
MODULATOR				
		MD301	592-808A	MCB8-UG3630 PAL B/G WO ATT
CONNECTOR				
		P1101	561-199F	52556-0710 (MOLEX)
		P1101	561-200F	53350-0710 (MOLEX)
		P3D01	561-103D	8370-051-000800 ELCO
		P5D03	561-059S	GB200-17P (GS-CABLE)

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		P5D04	561-059S	GB200-17P (GS-CABLE)
CIRCUIT BOARD ASSEMBLY				
		PBM00	515-962A	MAIN
		PBP00	515-572B	POWER1
TRANSFORMER				
	OR	PT101	641-041B	120V/230V/240V/50HZ
		PT101	641-341B	120V/230V/240V/50HZ
TRANSISTOR				
		Q111	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q112	0TR127309AA	KTA1273-TP-Y (KTA966A)KEC
	OR	Q113	0TR141400AA	2SD1933(R)POWER ROHM-J
		Q113	0TR193300AA	2SD1933(R)POWER ROHM-J
	OR	Q114	0TR141400AA	2SD1933(R)POWER ROHM-J
		Q114	0TR193300AA	2SD1933(R)POWER ROHM-J
		Q301	0TR126709AC	KTA1267-GR MINI TP KEC
		Q302	0TR126709AC	KTA1267-GR MINI TP KEC
		Q303	0TR126709AC	KTA1267-GR MINI TP KEC
		Q304	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q305	0TR319909AF	KTC3199-BL MINI TP KEC
		Q306	0TR126709AC	KTA1267-GR MINI TP KEC
		Q307	0TR319909AF	KTC3199-BL MINI TP KEC
		Q311	0TR126709AC	KTA1267-GR MINI TP KEC
		Q312	0TR319909AF	KTC3199-BL MINI TP KEC
		Q313	0TR319909AF	KTC3199-BL MINI TP KEC
		Q314	0TR319909AF	KTC3199-BL MINI TP KEC
		Q315	0TR319909AF	KTC3199-BL MINI TP KEC
		Q316	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q401	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q402	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q403	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q404	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q405	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q406	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q409	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q501	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q502	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q503	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q505	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q506	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q507	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q508	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q509	0TR103009AE	KRC103M-TP (KRC1203) KEC
RESISTOR				
		R111	0RD1001F608	1.0K 1/6W 5 TA26
		R112	0RD1001F608	1.0K 1/6W 5 TA26
		R113	0RD4701F608	4.7K 1/6W 5 TA26
		R114	0RD2202F608	22K 1/6W 5 TA26
		R301	0RD5601F608	5.6K 1/6W 5 TA26
		R302	0RD5601F608	5.6K 1/6W 5 TA26
		R303	0RD1001F608	1.0K 1/6W 5 TA26
		R304	0RD6800F608	680 1/6W 5 TA26
		R305	0RD1001F608	1.0K 1/6W 5 TA26
		R306	0RD4701F608	4.7K 1/6W 5 TA26
		R307	0RD1201F608	1.2K 1/6W 5 TA26
		R308	0RD0752F608	75 1/6W 5 TA26
		R309	0RD8201F608	8.2K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R310	0RD2201F608	2.2K 1/6W 5 TA26
		R311	0RD2201F608	2.2K 1/6W 5 TA26
		R312	0RD2701F608	2.7K 1/6W 5 TA26
		R313	0RD1004F608	1.0M 1/6W 5 TA26
		R315	0RD3301F608	3.3K 1/6W 5 TA26
		R316	0RD2201F608	2.2K 1/6W 5 TA26
		R317	0RD1202F608	12K 1/6W 5 TA26
		R318	0RD1002F608	10K 1/6W 5 TA26
		R319	0RD1002F608	10K 1/6W 5 TA26
		R320	0RD1001F608	1.0K 1/6W 5 TA26
		R321	0RD2202F608	22K 1/6W 5 TA26
		R323	0RD3301F608	3.3K 1/6W 5 TA26
		R324	0RD4701F608	4.7K 1/6W 5 TA26
		R325	CRD5601F608	5.6K 1/6W 5 TA26
		R326	0RD2202F608	22K 1/6W 5 TA26
		R328	0RD1501F608	1.5K 1/6W 5 TA26
		R329	0RD2700F608	270 1/6W 5 TA26
		R330	0RD1201F608	1.2K 1/6W 5 TA26
		R331	0RD1001F608	1.0K 1/6W 5 TA26
		R332	0RD1803F608	180K 1/6W 5 TA26
		R333	0RD2201F608	2.2K 1/6W 5 TA26
		R334	0RD1001F608	1.0K 1/6W 5 TA26
		R335	0RD1001F608	1.0K 1/6W 5 TA26
		R336	0RD3900F608	390 1/6W 5 TA26
		R340	0RD4701F608	4.7K 1/6W 5 TA26
		R341	0RD2700F608	270 1/6W 5 TA26
		R342	0RD3300F608	330 1/6W 5 TA26
		R343	0RD0222F608	22 1/6W 5 TA26
		R344	0RD2201F608	2.2K 1/6W 5 TA26
		R345	0RD1503F608	150K 1/6W 5 TA26
		R346	0RD1002F608	10K 1/6W 5 TA26
		R347	0RD1802F608	18K 1/6W 5 TA26
		R348	0RD1002F608	10K 1/6W 5 TA26
		R351	0RD1001F608	1.0K 1/6W 5 TA26
		R352	0RD2201F608	2.2K 1/6W 5 TA26
		R353	0RD2201F608	2.2K 1/6W 5 TA26
		R354	0RD1201F608	1.5K 1/6W 5 TA26
		R355	0RD3300F608	330 1/6W 5 TA26
		R356	0RD3900F608	390 1/6W 5 TA26
		R357	0RD6801F608	6.8K 1/6W 5 TA26
		R358	0RD1202F608	12K 1/6W 5 TA26
		R359	0RD2202F608	22K 1/6W 5 TA26
		R360	0RD5601F608	5.6K 1/6W 5 TA26
		R361	0RD2201F608	2.2K 1/6W 5 TA26
		R362	0RD1001F608	1.0K 1/6W 5 TA26
		R363	0RD2700F608	270 1/6W 5 TA26
		R365	0RD1001F608	560 1/6W 5 TA26
		R366	0RD2201F608	2.2K 1/6W 5 TA26
		R367	0RD1001F608	1.0K 1/6W 5 TA26
		R368	0RD3902F608	39K 1/6W 5 TA26
		R369	0RD2201F608	2.2K 1/6W 5 TA26
		R370	0RD4700F608	470 1/6W 5 TA26
		R371	0RD1001F608	1.0K 1/6W 5 TA26
		R372	0RD1502F608	15K 1/6W 5 TA26
		R373	0RD3901F608	3.9K 1/6W 5 TA26
		R374	0RD3302F608	33K 1/6W 5 TA26
		R375	0RD1001F608	1.0K 1/6W 5 TA26
		R401	0RD4700F608	470 1/6W 5 TA26
		R402	0RD1501F608	1.5K 1/6W 5 TA26
		R403	0RD3902F608	39K 1/6W 5 TA26
		R404	0RD4701F608	4.7K 1/6W 5 TA26
		R405	0RD3301F608	3.3K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R406	0RD3900F608	390 1/6W 5 TA26
		R407	0RD3303F608	330K 1/6W 5 TA26
		R408	0RD4701F608	4.7K 1/6W 5 TA26
		R409	0RD3902F608	39K 1/6W 5 TA26
		R410	0RD0682F608	68 1/6W 5 TA26
		R411	0RD3303F608	330K 1/6W 5 TA26
		R412	0RD1802F608	18K 1/6W 5 TA26
		R413	0RD3303F608	330K 1/6W 5 TA26
		R414	0RD1001F608	1.0K 1/6W 5 TA26
		R415	0RD4701F608	4.7K 1/6W 5 TA26
		R416	0RD4701F608	4.7K 1/6W 5 TA26
		R417	0RD1001F608	1.0K 1/6W 5 TA26
		R418	0RD2201F608	2.2K 1/6W 5 TA26
		R420	0RD5600F608	560 1/6W 5 TA26
		R421	0RD1001F608	1.0K 1/6W 5 TA26
		R422	0RD5600F608	560 1/6W 5 TA26
		R423	0RD1001F608	1.0K 1/6W 5 TA26
		R501	0RD2701F608	2.7K 1/6W 5 TA26
		R502	0RD2201F608	2.2K 1/6W 5 TA26
		R503	0RD2701F608	2.7K 1/6W 5 TA26
		R504	0RD2201F608	2.2K 1/6W 5 TA26
		R505	0RD1002F608	10K 1/6W 5 TA26
		R506	0RD2201F608	2.2K 1/6W 5 TA26
		R507	0RD1002F608	10K 1/6W 5 TA26
		R508	0RD1002F608	10K 1/6W 5 TA26
		R509	0RD1003F608	100K 1/6W 5 TA26
		R510	0RD2202F608	22K 1/6W 5 TA26
		R511	0RD4702F608	47K 1/6W 5 TA26
		R512	0RD2202F608	22K 1/6W 5 TA26
		R513	0RD6803F608	680K 1/6W 5 TA26
		R514	0RD4702F608	47K 1/6W 5 TA26
		R515	0RD4703F608	470K 1/6W 5 TA26
		R516	0RD4700F608	470 1/6W 5 TA26
		R517	0RD1003F608	100K 1/6W 5 TA26
		R518	0RD1001F608	1.0K 1/6W 5 TA26
		R519	0RD3303F608	330K 1/6W 5 TA26
		R520	0RD3300F608	330 1/6W 5 TA26
		R521	0RD1001F608	1.0K 1/6W 5 TA26
		R522	0RD1004F608	1.0M 1/6W 5 TA26
		R523	0RD2203F608	220K 1/6W 5 TA26
		R524	0RD2201F608	2.2K 1/6W 5 TA26
		R525	0RD5602F608	56K 1/6W 5 TA26
		R526	0RD1002F608	10K 1/6W 5 TA26
		R527	0RD1003F608	100K 1/6W 5 TA26
		R528	0RD4701F608	4.7K 1/6W 5 TA26
		R529	0RD1004F608	1.0M 1/6W 5 TA26
		R530	0RD2200F608	220 1/6W 5 TA26
		R531	0RD1001F608	1.0K 1/6W 5 TA26
		R532	0RD1001F608	1.0K 1/6W 5 TA26
		R533	0RD4701F608	4.7K 1/6W 5 TA26
		R534	0RD4701F608	4.7K 1/6W 5 TA26
		R535	0RD6801F608	6.8K 1/6W 5 TA26
		R536	0RD1004F608	1.0M 1/6W 5 TA26
		R537	0RD1002F608	10K 1/6W 5 TA26
		R538	0RD1002F608	10K 1/6W 5 TA26
		R539	0RD1002F608	10K 1/6W 5 TA26
		R540	0RD1002F608	10K 1/6W 5 TA26
		R541	0RD2702F608	27K 1/6W 5 TA26
		R542	0RD1001F608	1.0K 1/6W 5 TA26
		R543	0RD1501F608	1.5K 1/6W 5 TA26
		R544	0RD2702F608	27K 1/6W 5 TA26
		R545	0RD3302F608	33K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		IC302	0IRH702500A	BA7025L PAL/MESECAM SYNC DETEC
		IC303	0IKK740300B	MSM7403RS(2H CCD) DIP-PACK
		IC304	0ISA737600A	LA7376 2HD PRE-AMP
		IC501	0ISH820300K	LU8203 25,QFP(P-610M)
		IC502	0ISA711700A	LA7117 OP AMP
		IC503	0IMT523000C	PST-523D/T
		IC504	0IGS744500A	GL7445 (MOTOR DRIV-1CH) GSS
JACK				
		JK111	572-045A	HEC0470-01-230
		JK302	572-036F	BJP-202A
COIL				
		L301	0LA0332K018	33M K 2.3X3.4 L5 TP
		L302	0LR1000J025	100UH 5% 4X5 TR5
		L303	0LR1000J025	100UH 5% 4X5 TR5
		L304	0LR1000J025	100UH 5% 4X5 TR5
		L305	0LR1000J025	100UH 5% 4X5 TR5
		L306	0LR1000J025	100UH 5% 4X5 TR5
		L307	637-013B	PECK 6.80MH-J NYE
		L308	0LR1000J025	100UH 5% 4X5 TR5
		L309	0LA0272K018	27M K 2.3X3.4 L5 TP
		L310	0LA0472K018	47M K 2.3X3.4 L5 TP
		L311	0LA0152K018	15M K 2.3X3.4 L5 TP
		L312	0LA0682K018	68M K 2.3X3.4 L5 TP
		L313	0LR1000J025	100UH 5% 4X5 TR5
		L314	0LA0682K018	68M K 2.3X3.4 L5 TP
		L315	0LA0331K018	3.3UH K 2.3X3.4 L5 TP
		L321	0LA0332K018	33M K 2.3X3.4 L5 TP
		L322	0LR0682J025	68UH 5% 4X5 TR5
		L323	0LR1000J025	100UH 5% 4X5 TR5
		L324	0LA1800K018	180M K 2.3X3.4 L5 TP
		L325	0LR1000J025	100UH 5% 4X5 TR5
		L326	0LR0102J025	10UH 5% 4X5 TR5
		L4A1	0LA1000K018	100M K 2.3X3.4 L5 TP
		L4A2	636-010A	BEAD,BL01RN1-A62,MURATA
		L4A3	636-010A	BEAD,BL01RN1-A62,MURATA
		L501	0LR1000J025	100UH 5% 4X5 TR5
		L502	0LR1000J025	100UH 5% 4X5 TR5
		L503	0LR0562J025	56UH 5% 4X5 TR5
LED				
		LD501	0DL112000AL	DL-11S2RNSF(03 RED FORM) KOC
		LD502	0DL112000AM	DL-11S2GNSF(03 GREE FORM) KOC
		LD901	0DL112000AK	DL-11S2GNS(SUPPER,GREEN,03)KOC
		LD902	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD903	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD904	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
		LD905	0DL112000AJ	DL-11S2RNS(SUPER,RED,03)KOC
MODULATOR				
		MD301	592-808A	MCB8-UG3630 PAL B/G WO ATT
CONNECTOR				
		P1101	561-199F	52556-0710 (MOLEX)
		P1101	561-200F	53350-0710 (MOLEX)
		P3D01	561-103D	8370-051-000800 ELCO
		P5D03	561-059S	GB200-17P (GS-CABLE)

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		P5D04	561-059S	GB200-17P (GS-CABLE)
CIRCUIT BOARD ASSEMBLY				
		PBM00	515-962A	MAIN
		PBP00	515-572B	POWER1
TRANSFORMER				
	OR	PT101	641-041B	120V/230V/240V/50HZ
		PT101	641-341B	120V/230V/240V/50HZ
TRANSISTOR				
		Q111	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q112	0TR127309AA	KTA1273-TP-Y (KTA966A)KEC
	OR	Q113	0TR141400AA	2SD1933(R)POWER ROHM-J
		Q113	0TR193300AA	2SD1933(R)POWER ROHM-J
	OR	Q114	0TR141400AA	2SD1933(R)POWER ROHM-J
		Q114	0TR193300AA	2SD1933(R)POWER ROHM-J
		Q301	0TR126709AC	KTA1267-GR MINI TP KEC
		Q302	0TR126709AC	KTA1267-GR MINI TP KEC
		Q303	0TR126709AC	KTA1267-GR MINI TP KEC
		Q304	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q305	0TR319909AF	KTC3199-BL MINI TP KEC
		Q306	0TR126709AC	KTA1267-GR MINI TP KEC
		Q307	0TR319909AF	KTC3199-BL MINI TP KEC
		Q311	0TR126709AC	KTA1267-GR MINI TP KEC
		Q312	0TR319909AF	KTC3199-BL MINI TP KEC
		Q313	0TR319909AF	KTC3199-BL MINI TP KEC
		Q314	0TR319909AF	KTC3199-BL MINI TP KEC
		Q315	0TR319909AF	KTC3199-BL MINI TP KEC
		Q316	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q401	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q402	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q403	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q404	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q405	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q406	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q409	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q501	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q502	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q503	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q505	0TR103009AE	KRC103M-TP (KRC1203) KEC
		Q506	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q507	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q508	0TR319809AC	KTC3198-TP-BL (KTC1815)KEC
		Q509	0TR103009AE	KRC103M-TP (KRC1203) KEC
RESISTOR				
		R111	0RD1001F608	1.0K 1/6W 5 TA26
		R112	0RD1001F608	1.0K 1/6W 5 TA26
		R113	0RD4701F608	4.7K 1/6W 5 TA26
		R114	0RD2202F608	22K 1/6W 5 TA26
		R301	0RD5601F608	5.6K 1/6W 5 TA26
		R302	0RD5601F608	5.6K 1/6W 5 TA26
		R303	0RD1001F608	1.0K 1/6W 5 TA26
		R304	0RD6800F608	680 1/6W 5 TA26
		R305	0RD1001F608	1.0K 1/6W 5 TA26
		R306	0RD4701F608	4.7K 1/6W 5 TA26
		R307	0RD1201F608	1.2K 1/6W 5 TA26
		R308	0RD0752F608	75 1/6W 5 TA26
		R309	0RD8201F608	8.2K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R310	0RD2201F608	2.2K 1/6W 5 TA26
		R311	0RD2201F608	2.2K 1/6W 5 TA26
		R312	0RD2701F608	2.7K 1/6W 5 TA26
		R313	0RD1004F608	1.0M 1/6W 5 TA26
		R315	0RD3301F608	3.3K 1/6W 5 TA26
		R316	0RD2201F608	2.2K 1/6W 5 TA26
		R317	0RD1202F608	12K 1/6W 5 TA26
		R318	0RD1002F608	10K 1/6W 5 TA26
		R319	0RD1002F608	10K 1/6W 5 TA26
		R320	0RD1001F608	1.0K 1/6W 5 TA26
		R321	0RD2202F608	22K 1/6W 5 TA26
		R323	0RD3301F608	3.3K 1/6W 5 TA26
		R324	0RD4701F608	4.7K 1/6W 5 TA26
		R325	0RD5601F608	5.6K 1/6W 5 TA26
		R326	0RD2202F608	22K 1/6W 5 TA26
		R328	0RD1501F608	1.5K 1/6W 5 TA26
		R329	0RD2700F608	270 1/6W 5 TA26
		R330	0RD1201F608	1.2K 1/6W 5 TA26
		R331	0RD1001F608	1.0K 1/6W 5 TA26
		R332	0RD1803F608	180K 1/6W 5 TA26
		R333	0RD2201F608	2.2K 1/6W 5 TA26
		R334	0RD1001F608	1.0K 1/6W 5 TA26
		R335	0RD1001F608	1.0K 1/6W 5 TA26
		R336	0RD3900F608	390 1/6W 5 TA26
		R340	0RD4701F608	4.7K 1/6W 5 TA26
		R341	0RD2700F608	270 1/6W 5 TA26
		R342	0RD3300F608	330 1/6W 5 TA26
		R343	0RD0222F608	22 1/6W 5 TA26
		R344	0RD2201F608	2.2K 1/6W 5 TA26
		R345	0RD1503F608	150K 1/6W 5 TA26
		R346	0RD1002F608	10K 1/6W 5 TA26
		R347	0RD1802F608	18K 1/6W 5 TA26
		R348	0RD1002F608	10K 1/6W 5 TA26
		R351	0RD1001F608	1.0K 1/6W 5 TA26
		R352	0RD2201F608	2.2K 1/6W 5 TA26
		R353	0RD2201F608	2.2K 1/6W 5 TA26
		R354	0RD1201F608	1.5K 1/6W 5 TA26
		R355	0RD3300F608	330 1/6W 5 TA26
		R356	0RD3900F608	390 1/6W 5 TA26
		R357	0RD6801F608	6.8K 1/6W 5 TA26
		R358	0RD1202F608	12K 1/6W 5 TA26
		R359	0RD2202F608	22K 1/6W 5 TA26
		R360	0RD5601F608	5.6K 1/6W 5 TA26
		R361	0RD2201F608	2.2K 1/6W 5 TA26
		R362	0RD1001F608	1.0K 1/6W 5 TA26
		R363	0RD2700F608	270 1/6W 5 TA26
		R365	0RD1001F608	560 1/6W 5 TA26
		R366	0RD2201F608	2.2K 1/6W 5 TA26
		R367	0RD1001F608	1.0K 1/6W 5 TA26
		R368	0RD3902F608	39K 1/6W 5 TA26
		R369	0RD2201F608	2.2K 1/6W 5 TA26
		R370	0RD4700F608	470 1/6W 5 TA26
		R371	0RD1001F608	1.0K 1/6W 5 TA26
		R372	0RD1502F608	15K 1/6W 5 TA26
		R373	0RD3901F608	3.9K 1/6W 5 TA26
		R374	0RD3302F608	33K 1/6W 5 TA26
		R375	0RD1001F608	1.0K 1/6W 5 TA26
		R401	0RD4700F608	470 1/6W 5 TA26
		R402	0RD1501F608	1.5K 1/6W 5 TA26
		R403	0RD3902F608	39K 1/6W 5 TA26
		R404	0RD4701F608	4.7K 1/6W 5 TA26
		R405	0RD3301F608	3.3K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R406	0RD3900F608	390 1/6W 5 TA26
		R407	0RD3303F608	330K 1/6W 5 TA26
		R408	0RD4701F608	4.7K 1/6W 5 TA26
		R409	0RD3902F608	39K 1/6W 5 TA26
		R410	0RD0682F608	68 1/6W 5 TA26
		R411	0RD3303F608	330K 1/6W 5 TA26
		R412	0RD1802F608	18K 1/6W 5 TA26
		R413	0RD3303F608	330K 1/6W 5 TA26
		R414	0RD1001F608	1.0K 1/6W 5 TA26
		R415	0RD4701F608	4.7K 1/6W 5 TA26
		R416	0RD4701F608	4.7K 1/6W 5 TA26
		R417	0RD1001F608	1.0K 1/6W 5 TA26
		R418	0RD2201F608	2.2K 1/6W 5 TA26
		R420	0RD5600F608	560 1/6W 5 TA26
		R421	0RD1001F608	1.0K 1/6W 5 TA26
		R422	0RD5600F608	560 1/6W 5 TA26
		R423	0RD1001F608	1.0K 1/6W 5 TA26
		R501	0RD2701F608	2.7K 1/6W 5 TA26
		R502	0RD2201F608	2.2K 1/6W 5 TA26
		R503	0RD2701F608	2.7K 1/6W 5 TA26
		R504	0RD2201F608	2.2K 1/6W 5 TA26
		R505	0RD1002F608	10K 1/6W 5 TA26
		R506	0RD2201F608	2.2K 1/6W 5 TA26
		R507	0RD1002F608	10K 1/6W 5 TA26
		R508	0RD1002F608	10K 1/6W 5 TA26
		R509	0RD1003F608	100K 1/6W 5 TA26
		R510	0RD2202F608	22K 1/6W 5 TA26
		R511	0RD4702F608	47K 1/6W 5 TA26
		R512	0RD2202F608	22K 1/6W 5 TA26
		R513	0RD6803F608	680K 1/6W 5 TA26
		R514	0RD4702F608	47K 1/6W 5 TA26
		R515	0RD4703F608	470K 1/6W 5 TA26
		R516	0RD4700F608	470 1/6W 5 TA26
		R517	0RD1003F608	100K 1/6W 5 TA26
		R518	0RD1001F608	1.0K 1/6W 5 TA26
		R519	0RD3303F608	330K 1/6W 5 TA26
		R520	0RD3300F608	330 1/6W 5 TA26
		R521	0RD1001F608	1.0K 1/6W 5 TA26
		R522	0RD1004F608	1.0M 1/6W 5 TA26
		R523	0RD2203F608	220K 1/6W 5 TA26
		R524	0RD2201F608	2.2K 1/6W 5 TA26
		R525	0RD5602F608	56K 1/6W 5 TA26
		R526	0RD1002F608	10K 1/6W 5 TA26
		R527	0RD1003F608	100K 1/6W 5 TA26
		R528	0RD4701F608	4.7K 1/6W 5 TA26
		R529	0RD1004F608	1.0M 1/6W 5 TA26
		R530	0RD2200F608	220 1/6W 5 TA26
		R531	0RD1001F608	1.0K 1/6W 5 TA26
		R532	0RD1001F608	1.0K 1/6W 5 TA26
		R533	0RD4701F608	4.7K 1/6W 5 TA26
		R534	0RD4701F608	4.7K 1/6W 5 TA26
		R535	0RD6801F608	6.8K 1/6W 5 TA26
		R536	0RD1004F608	1.0M 1/6W 5 TA26
		R537	0RD1002F608	10K 1/6W 5 TA26
		R538	0RD1002F608	10K 1/6W 5 TA26
		R539	0RD1002F608	10K 1/6W 5 TA26
		R540	0RD1002F608	10K 1/6W 5 TA26
		R541	0RD2702F608	27K 1/6W 5 TA26
		R542	0RD1001F608	1.0K 1/6W 5 TA26
		R543	0RD1501F608	1.5K 1/6W 5 TA26
		R544	0RD2702F608	27K 1/6W 5 TA26
		R545	0RD3302F608	33K 1/6W 5 TA26

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
		R546	0RD1802F608	18K 1/6W 5 TA26
		R547	0RD1002F608	10K 1/6W 5 TA26
		R548	0RD2200F608	220 1/6W 5 TA26
		R549	0RD2202F608	22K 1/6W 5 TA26
		R550	0RD3901F608	3.9K 1/6W 5 TA26
		R551	0RD1202F608	12K 1/6W 5 TA26
		R552	0RD1004F608	1.0M 1/6W 5 TA26
		R553	0RD4702F608	47K 1/6W 5 TA26
		R554	0RD1203F608	120K 1/6W 5 TA26
		R555	0RD3301F608	3.3K 1/6W 5 TA26
		R556	0RD1002F608	10K 1/6W 5 TA26
		R557	0RD1003F608	100K 1/6W 5 TA26
		R558	0RD1003F608	100K 1/6W 5 TA26
		R559	0RD2201F608	2.2K 1/6W 5 TA26
		R560	0RD1501F608	1.5K 1/6W 5 TA26
		R561	0RD2201F608	2.2K 1/6W 5 TA26
		R562	0RD2201F608	2.2K 1/6W 5 TA26
		R563	0RD1001F608	1.0K 1/6W 5 TA26
		R564	0RD2201F608	2.2K 1/6W 5 TA26
		R567	0RD1203F608	120K 1/6W 5 TA26
		R570	0RD0101F608	1.0 1/6W 5 TA26
		R571	0RD0101F608	1.0 1/6W 5 TA26
		R573	0RD1002F608	10K 1/6W 5 TA26
		R574	0RD1202F608	12K 1/6W 5 TA26
		R576	0RD3900F608	390 1/6W 5 TA26
		R577	0RD2203F608	220K 1/6W 5 TA26
		R578	0RD8202F608	82K 1/6W 5 TA26
		R579	0RD8202F608	82K 1/6W 5 TA26
		R580	0RD1002F608	10K 1/6W 5 TA26
		R581	0RD1002F608	10K 1/6W 5 TA26
		R582	0RD1002F608	10K 1/6W 5 TA26
		R583	0RD4701F608	4.7K 1/6W 5 TA26
		R584	0RD4701F608	4.7K 1/6W 5 TA26
		R585	0RD4701F608	4.7K 1/6W 5 TA26
		R586	0RD1500F608	150 1/6W 5 TA26
		R589	0RD3900F608	390 1/6W 5 TA26
		R590	0RD5600F608	560 1/6W 5 TA26
		R591	0RD2700F608	270 1/6W 5 TA26
		R592	0RD3900F608	390 1/6W 5 TA26
		R593	0RD3900F608	390 1/6W 5 TA26
REMOCON RECEIVER				
		RC901	668-226S	R/C REC(GL3276)H=25MM MESH KTC
SWITCH				
		SW501	556-213A	SKHV10914A (GS-ALPS)
		SW502	556-213A	SKHV10914A (GS-ALPS)
		SW503	556-213A	SKHV10914A (GS-ALPS)
		SW504	556-213A	SKHV10914A (GS-ALPS)
		SW505	556-213A	SKHV10914A (GS-ALPS)
		SW506	556-213A	SKHV10914A (GS-ALPS)
		SW507	556-213A	SKHV10914A (GS-ALPS)
VARIABLE RESISTOR				
		VR501	613-032U	RH0638C15R0WA (100K)
CRYSTAL				
		X301	529-027P	4.433619MHZ 15PPM KSS
	OR	X501	529-020P	4.433619MHZ 15PPM KSS
		X501	529-027P	4.433619MHZ 15PPM KSS

S	AL	LOCA.NO	PART NO(GS)	SPECIFICATION
ZENER DIODE				
		ZD111	0DZ150009BB	MTZ15C TP ROHM-K
		ZD401	0DZ100009AA	MTZ10B MINI TP ROHM-K
		ZD501	0DZ820009BB	UZ8.2BSC 5M/M TP UNIZON
		ZD502	0DZ100009AA	MTZ10B MINI TP ROHM-K